



Monday, July 8, 2019

Publications Committee Meeting

6:00 AM - 8:00 AM

415A/B

ASAS-NANP Symposium

Chair: Luis Tedeschi, Texas A&M University

8:30 AM - 5:00 PM

Meeting Room 10A/B

8:30 a.m. **ASAS-NANP Symposium Introduction**

8:40 a.m. 2 **Introduction to mathematical models**

Mark Hanigan¹

¹Virginia Tech

10:10 a.m. **ASAS-NANP Symposium Break I**

10:30 a.m. 3 **Building Models for Animal Production and Management with System Dynamics Modeling**

Benjamin L. Turner¹

¹Texas A&M University-Kingsville

12:00 p.m. **ASAS-NANP Symposium Lunch**

1:00 p.m. 4 **Introduction to R Scripting and Data Analyses**

Robin R. White¹

¹Virginia Tech School of Animal Sciences

2:30 p.m. **ASAS-NANP Symposium Break II**

2:50 p.m. 1 **Assessing the predictive adequacy of simple and complex mathematical models**

Luis O. Tedeschi¹

¹Texas A&M University

4:30 p.m. **ASAS-NANP Symposium Q&A**

Exhibitor Move-in

1:00 PM - 6:00 PM

Ballroom D

Tuesday, July 9, 2019

Poster Upload Hours

6:30 AM - 6:00 PM
Ballroom D

ASAS Foundation Committee Meeting

7:00 AM - 8:00 AM
602

Exhibit Hall Hours - Tuesday

Chair:

8:00 AM - 5:00 PM
Ballroom D

Poster Session I

7:00 AM - 9:00 AM
Ballroom D

7:00 a.m. PSI-13 **Allometric growth patterns in turkeys (*Meleagris gallopavo*) show no significant increase in total carcass meat yield**

Ryley J. Vanderhout¹, Christine F. Baes², Jeff S. Mohr³, Ben J. Wood³

¹University of Guelph, ²Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern, Switzerland, ³Hybrid Turkeys

7:00 a.m. PSI-37 **Comparative evaluation of growth parameters in pure and hybrid African Catfishes**

Olatunji T. Abanikannda¹, Ayobami Abagun¹, Abayomi Jimoh¹

¹Lagos State University

7:00 a.m. PSI-8 **Comparison of heat stress behaviour between different Canadian *Bos taurus* cattle breeds using unmanned aerial vehicles**

Justin Mufford¹, John S. Church¹, Matt Reudink¹, Mark Rakobowchuk¹, Carmen Bell¹, Stefany Rasmussen¹

¹Thompson Rivers University

7:00 a.m. PSI-35 **Comparison of in situ techniques to evaluate the recovery of indigestible components and the accuracy of digestibility estimates**

Jordan Adams¹, Aaron B. Norris², Luis O. Tedeschi¹

¹Texas A&M University, ²Texas Tech University

7:00 a.m. PSI-15 **Determining the molecular mechanism through which estradiol and trenbolone acetate improve skeletal muscle growth in beef cattle.**

Caleb C. Reichhardt¹, Chris A. Bidwell², Aaron Thomas³, Amir Ahmadpour³

¹University of Hawai'i at Mānoa, ²Purdue University, ³Utah State University

7:00 a.m. PSI-12 **Effect of a carbohydrase mixture on apparent and standardized ileal digestibility of amino acids in dry extruded-expelled soybean meal fed to growing pigs**

Jichen Song ¹, Ahmed Aljuobori ¹, Charles Martin Nyachoti ¹, Gustavo A. Mejicanos ²
¹University of Manitoba, ²University of Manitoba, Department of Animal Science

7:00 a.m. PSI-33 **Effect of conditioning temperature and pellet diameter on nursery pig growth performance**

Olivia Harrison ¹, Ashton Yoder ¹, Cassandra K. Jones ¹
¹Kansas State University

7:00 a.m. PSI-4 **Effect of rumen protected capsaicin on dry matter intake, average daily gain, and carcass characteristics in finishing beef cattle**

John C. Eidsvik ¹, John J. McKinnon ², Diego Moya ³, Alexandra Blanchard ⁴
¹University of Saskatchewan, ²Department of Animal and Poultry Science, University of Saskatchewan, ³Department of Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, ⁴Pancosma SA

7:00 a.m. PSI-36 **Effect of short-chain fructooligosaccharides on Trolox equivalent antioxidant capacity and thiobarbituric acid reactive substances in mature and senior stock-type horses**

Emili McClure ¹, Courtney P. Heaton ¹, Dishnu Sajeev ¹, Thu Dinh ¹
¹Mississippi State University

7:00 a.m. PSI-3 **Effect of stage of maturity of forage pea cultivar (*Pisium sativum* L.) in hay on palatability, ruminal fermentation, and digestibility when fed to beef cattle**

Alex Pursley ¹, Bill Biligetu ², Tom Warkentin ¹, Herbert A. Lardner ³
¹University of Saskatchewan, ²Department of Plant Sciences, University of Saskatchewan, ³Department of Animal and Poultry Science, University of Saskatchewan

7:00 a.m. PSI-28 **Effect of supplementation with low-moisture, sugarcane molasses-based block on intake and ruminal volatile fatty acid profile on steers fed low quality forage**

Andresa L. Feliciano ¹, Sérgio A. G. Pereira-Junior ¹, Yury Tatiana Granja-Salcedo ², Livia Maria Sampaio Ferraz Sepini de Souza Grilo ³, Luís Felipe Arelaro Artioli ⁴, Fabiano A. Barbosa ⁵
¹Sao Paulo State University, ²Corporación Colombiana de Investigación Agropecuaria - AGROSAVIA, ³UNESP, ⁴Heus Animal Nutrition Industry, ⁵De Heus Animal Nutrition B.V.

7:00 a.m. PSI-26 **Effects of low-moisture, sugarcane molasses-based block supplementation on feed intake and ingestive behavior of Nellore steers fed low-quality forage**

Andresa L. Feliciano ¹, Sérgio A. G. Pereira-Junior ¹, Yury Tatiana Granja-Salcedo ², Livia Maria Sampaio Ferraz Sepini de Souza Grilo ³, Luís Felipe Arelaro Artioli ⁴, Fabiano A. Barbosa ⁵
¹Sao Paulo State University, ²Corporación Colombiana de Investigación Agropecuaria - AGROSAVIA, ³UNESP, ⁴Heus Animal Nutrition Industry, ⁵De Heus Animal Nutrition B.V.

7:00 a.m. PSI-25 **Effects of restricted maternal nutrition and realimentation during gestation on the fetal progenitor cell population in semitendinosus muscle of sheep**

Michaela Mitchell ¹, Amanda E. Liefeld ¹, Kristen E. Govoni ², Kimberly A. Vonnahme ³, Anna T. Grazul-Bilska ⁴, Kendall C. Swanson ⁴, Steven A. Zinn ², Sarah A. Reed ²

¹University of Connecticut, ²Dept. of Animal Science, University of Connecticut, ³Zoetis,

⁴North Dakota State University

7:00 a.m. PSI-1 **Effects of source and level of inclusion of engineered biocarbon in a total mixed beef cattle diet on in vitro methane emissions and fermentation parameters**

Paul Tamayao ¹, Kim H. Ominski ², Gabriel Ribeiro ³, Emma J. J. McGeough ²

¹Department of Animal Science, University of Manitoba, ²University of Manitoba,

³Department of Production Animal Health, Faculty of Veterinary Medicine, University of Calgary, Calgary, AB T2N 4Z6, Canada

7:00 a.m. PSI-22 **Effects of supplementing sugar beet processing by-products in low-quality forage diets on in vitro fermentation characteristics and dry matter digestibility**

Glory M. Ogren ¹, Gwinyai E. Chibisa ¹

¹University of Idaho

7:00 a.m. PSI-7 **Effects of sustained hyperprolactinemia in late gestation on mammary development of gilts**

Anouk Caron ¹, Russ C. Hovey ², Marie-France Palin ³, Julia R. Cohen ², Jean-Paul Laforest ¹, Chantal Farmer ⁴

¹Laval University, ²University of California Davis, ³Agriculture and Agri-Food Canada,

⁴Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre

7:00 a.m. PSI-10 **Establishing a foundation to harvest the potential of the microbiome in poultry production**

Camila S. Marcolla ¹, Ben Willing ¹

¹University of Alberta

7:00 a.m. PSI-2 **Evaluation of feed by-products on in vitro DMD, methane production and ruminal fermentation parameters**

Sidonie P. Robinson ¹, Kim H. Ominski ¹, Karin Wittenberg ¹, Emma J. J. McGeough ¹

¹University of Manitoba

7:00 a.m. PSI-38 **Evaluation of increasing oat groats in nursery pig diets**

Jenna A. Chance ¹, Annie B. Lerner ², Joel M. DeRouchey ¹, Jason C. Woodworth ¹, Mike D. Tokach ¹, Robert D. Goodband ¹

¹Kansas State University, ²Schwartz Farms, Inc.

7:00 a.m. PSI-27 **Excretion of purine derivatives and rumen microbial protein synthesis in Nelore steers supplemented with low-moisture, sugarcane molasses-based block and fed low-quality forage**

Andresa L. Feliciano ¹, Sérgio A. G. Pereira-Junior ¹, Yury Tatiana Granja-Salcedo ², Livia Maria Sampaio Ferraz Sepini de Souza Grilo ³, Luís Felipe Arelaro Artioli ⁴, Fabiano A. Barbosa ⁵

¹Sao Paulo State University, ²Corporación Colombiana de Investigación Agropecuaria - AGROSAVIA, ³UNESP, ⁴Heus Animal Nutrition Industry, ⁵De Heus Animal Nutrition B.V.

7:00 a.m. PSI-16 **Exploring Complete Blood Count as a Predictor of Resilience in Pigs Using a Natural Disease Challenge Model**

Xuechun Bai ¹, Austin Putz ², Zhiquan Wang ³, Frederic Fortin ⁴, John Harding ⁵, Jack C.M. Dekkers ⁶, Catherine Field ¹, Graham Plastow ¹

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Hendrix Genetics, ³Livestock Gentec, University of Alberta, ⁴Centre de Développement du Porc du Québec Inc., ⁵Department of Large Animal Clinical Sciences, University of Saskatchewan, ⁶Department of Animal Science, Iowa State University

7:00 a.m. PSI-30 **Identification of fetal microchimerism in older ewes using qPCR**

Hannah M. Teague ¹, Erika S. Niland ¹, Natalie L. Pierce ², J. Bret Taylor ², J. Alison Brown ¹

¹Wingate University, ²USDA

7:00 a.m. PSI-31 **Impact of feeding increasing levels of dried distillers grains with solubles on Boer goat carcass characteristics**

Abbey Pentz ¹, Cassandra K. Jones ¹

¹Kansas State University

7:00 a.m. PSI-29 **Impact of sociometric status on brush utilization in environmentally-enriched, feedlot steers**

Xandra Christine A. Meneses ¹, Rachel M. Park ¹, Courtney L. Daigle ²

¹Texas A&M University, ²Department of Animal Science, Texas A&M University

7:00 a.m. PSI-32 **Impact of titrating levels of dried distillers grains with solubles as a replacement of soybean meal on Boer goat fat quality**

Linnea Rimmer ¹, Cassandra K. Jones ¹

¹Kansas State University

7:00 a.m. PSI-23 **In vitro fermentation characteristics for Cheatgrass (*Bromus tectorum* L.) and Medusahead (*Taeniatherum caputmedusae* L.) harvested on Idaho rangeland in different seasons.**

Scott Jensen ¹, Cheyanne A. Myers ², Gwinyai E. Chibisa ²

¹University of Idaho Extension, ²University of Idaho

7:00 a.m. PSI-5 **Intestinal Responses and the Determination of True Total Tract Trace Mineral Digestibility and the Endogenous Losses in Weanling Pigs by the Regression Analysis Technique**

Zeyu Yang ¹, Hongzhi Wu ², Tania L. Archbold ¹, Xindi Yin ¹, Wenyi Fan ¹

¹University of Guelph, ²College of Animal Sciences and Technology, Northeast Agricultural University; and Department of Animal Biosciences, University of Guelph

7:00 a.m. PSI-17 **Late Season Sorghum Produced for Silage in Southwest Louisiana**

William A. Storer¹, Karlye Crawford¹, Luke Billeaudeau¹
¹McNeese State University

7:00 a.m. PSI-9 **Molecular characterization of Berganês sheep, a locally adapted ecotype from Brazilian semi-arid region**

Riani Ananda Nunes Soares¹, Joel Fonseca Nogueira², João Bandeira de Moura Neto³, Gisele Veneroni Gouveia⁴, Maria Norma Ribeiro⁵, João José de Simoni Gouveia⁴
¹University of Guelph, ²Masters in Veterinary Science in the Semi-Arid, Universidade Federal do Vale do São Francisco, ³Integrated PhD Program in Animal Science, Universidade Federal Rural de Pernambuco, ⁴Animal Sciences Department, Universidade Federal do Vale do São Francisco, ⁵Animal Sciences Department, Universidade Federal Rural de Pernambuco

7:00 a.m. PSI-24 **Poor maternal nutrition and gestational age affect oxidative stress in offspring muscle**

Helen R. Iannitti¹, Brittany A. Dias¹, Amanda K. Jones², Dominique E. Martin¹, Sambhu Pillai³, Maria L. Hoffman⁴, Kristen E. Govoni⁵, Steven A. Zinn⁵, Sarah A. Reed⁵
¹University of Connecticut, ²University of Colorado Denver, ³Georgetown University, ⁴University of Rhode Island, ⁵Dept. of Animal Science, University of Connecticut

7:00 a.m. PSI-19 **Poor Maternal Nutrition During Gestation Alters Placental IGF-I, IGF-II, and IGFBP-3 mRNA Expression in Sheep**

Caitlyn A. Splaine¹, Maria L. Hoffman², Amanda K. Jones³, Sambhu Pillai⁴, Steven A. Zinn⁵, Kristen E. Govoni⁵, Sarah A. Reed⁵
¹University of Connecticut, ²University of Rhode Island, ³University of Colorado Denver, ⁴Georgetown University, ⁵Dept. of Animal Science, University of Connecticut

7:00 a.m. PSI-21 **Public perception of equine and livestock management varies by classification of horses, industry experience, and animal welfare definitions**

Shelby Wallace¹, Kelly Melvin², Liesel G. Schneider³, Jennie L. Ivey¹
¹University of Tennessee Institute of Agriculture, ²University of Tennessee, ³Animal Science Department, University of Tennessee Institute of Agriculture

7:00 a.m. PSI-18 **Rumen fluid metabolites associated with feed efficiency in Angus steers**

Brooke A. Clemmons¹, Madison T. Henniger², Joshua B. Powers¹, Mallory M. Embree³, Brynn H. Voy⁴, Phillip R. Myer⁵
¹University of Tennessee Knoxville, ²Department of Animal Science -University of Tennessee, ³Ascus Biosciences, Inc., ⁴University of Tennessee, ⁵Department of Animal Science- University of Tennessee

7:00 a.m. PSI-11 **Standardized total tract digestibility of phosphorus in high-protein sunflower meal fed to growing pigs with or without phytase supplementation**

Jinyoung Lee¹, Jong Woong Kim², Charles Martin Nyachoti¹
¹University of Manitoba, ²Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada

7:00 a.m. PSI-20 **The effect of ewe gastrointestinal nematode burden during the periparturient period on lamb growth**

Allison Mosichuk¹, Katherine Petersson², Maria L. Hoffman²

¹University of Rhode Island, ²University of Rhode Island

7:00 a.m. PSI-6 **The Impact of Saccharomyces cerevisiae on Animal Performance and Rumen Health Indicators During the Late Finishing Phase for Feedlot Steers**

Melissa S. Williams¹, Ousama Alzahal², Ira B. Mandell¹, Brian W. McBride¹

¹University of Guelph, ²AB Vista

7:00 a.m. PSI-34 **The Impact of Varying Protein Sources on Feedlot Goat Fecal Microbiome**

Allianna Mitchell¹, Cassandra K. Jones¹

¹Kansas State University

Beef Species Symposium I: Cattle Adapted to Tropical/Subtropical Environments

Chair: Reinaldo Cooke, Texas A&M University

8:30 AM - 5:30 PM

Meeting Room 10A/B

8:30 a.m. 40 **Dairy cattle overview in tropical and subtropical environments**

Ronaldo Cerri¹

¹The University of British Columbia

9:00 a.m. 34 **Reproductive management of beef females in tropical and sub-tropical environments**

Nicky Oosthuizen¹, Pedro Levy Piza Fontes², G. Cliff Lamb²

¹ABS Global, ²Texas A&M University

9:30 a.m. 39 **Reproductive challenges of cattle adapted to tropical and subtropical environments**

Ky G. Pohler¹, Sydney T. Reese¹, Gessica Aruajo Franco¹, Ramiro V. Oliveira¹, Lohana Fernandez Montero¹, Gabriela Dalmaso de Melo², Ana Moraes¹

¹Texas A&M University, ²Department of Animal Reproduction - University of São Paulo

10:00 a.m. 41 **Reproductive management of beef females in South America**

José Luiz Vasconcelos¹, Reinaldo F. Cooke², Mauro Meneghetti³, Isaias Claro Junior³, Rogerio Peres³, Adnan Rodrigues³, Fernando Aono³, Wedson Costa³, Ocilon Sá Filho³

¹São Paulo State University, ²Texas A&M University, ³São Paulo State University (UNESP), School of Veterinary Medicine and Animal Science

10:30 a.m. **Beef Species Symposium I Break I**

11:00 a.m. 37 **Genetic aspects of livestock adaptation**

David G. Riley¹

¹Texas A&M University

11:30 a.m. 36 **Matching Cow's Genetics to the Environment Using Genomics**
Jared E. Decker ¹, Troy N. Rowan ¹, Sara Nilson ¹, Harly J. Durbin ¹, Camila U. Braz ¹,
Robert D. Schnabel ¹, Christopher Seabury ²
¹University of Missouri, ²Texas A&M University

2:00 p.m. 35 **Warm-season perennial grass management in tropical and subtropical regions**
Joao Vendramini ¹
¹UF/IFAS - Range Cattle Research & Education Center

2:30 p.m. 32 **Nutritional management of forage-based cow-calf operations**
Philippe Moriel ¹
¹University of Florida

3:00 p.m. 43 **Nutritional management for tropical-subtropical-adapted cattle receiving high-concentrate diets**
Madeline E. Rivera ¹, Jordan Adams ², Luis O. Tedeschi ²
¹Texas A&M university, ²Texas A&M University

3:30 p.m. **Beef Species Symposium I Break II**

4:00 p.m. 38 **Welfare and behavior considerations for cattle in tropical and subtropical environments**
Courtney L. Daigle ¹
¹Department of Animal Science, Texas A&M University

4:30 p.m. 42 **Carcass quality of cattle raised in tropical/subtropical environments**
Stephen B. Smith ¹
¹Texas A&M University

5:00 p.m. 33 **Nutritional Programming of Puberty in Bos indicus-influenced Heifers**
Rodolfo C. Cardoso ¹, Gary L. Williams ²
¹Texas A&M University, ²Animal Reproduction Laboratory, Texas A&M AgriLife Research, Beeville, TX; Department of Animal Science, Texas A&M University, College Station, TX

CSAS Oral Student Competition: MS Session

Chair: Michael Steele, Department of Animal Biosciences, University of Guelph
8:45 AM - 12:30 PM
Meeting Room 10C

8:45 a.m. 76 **Does Supplemental Protein and Rumen-Protected Methionine Improve Performance and Digestibility During Late-Gestation in Beef Cows?**
Madeline M. Collins ¹, Michaela K.S Lievre ¹, Kaitlyn VJ Lawson ¹, Ira B. Mandell ¹, Anna-Kate Shoveller ², Katie M. Wood ¹
¹University of Guelph, ²Department of Animal Biosciences, University of Guelph

9:00 a.m. 78 **Effects of Isomaltooligosaccharide and Bacillus supplementation on sow performance, serum metabolite and oxidative status in serum and placenta**

Xueling Gu ¹, Hao Li ¹, Zehe Song ¹, Yanan Ding ¹, Xi He ¹, Zhiyong Fan ¹

¹Hunan Agricultural University

9:15 a.m. 75 **Evaluating the in vitro release of essential oils from microparticles in simulated swine gastric and intestinal fluids and the essential oil stability in microparticles during feed pelleting process**

Janghan Choi ¹, Lucy Wang ¹, Joshua Gong ², Ludovic Lahaye ³, Song Liu ¹, Martin Nyachoti ¹, chengbo Yang ⁴

¹University of Manitoba, ²Guelph Research and Development Centre, Agriculture & Agri-Food Canada, Guelph, Ontario N1G 5C9, Canada, ³Jefo, ⁴Department of Animal Science, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

9:30 a.m. 73 **Within and between animal variation in supplement intake with the use of a novel precision feeding system for beef cattle**

Brandon Hanson ¹, Jason Morrison ², Emma J. J. McGeough ³, Karin Wittenberg ³, Kim H. Ominski ³

¹University of Manitoba Department of Animal Science, ²University of Manitoba Department of Biosystems, ³University of Manitoba

9:45 a.m. 81 **Effects of engineered biocarbons on total gas and methane production, rumen fermentation and microbial protein synthesis in a semi continuous fermentation system (RUSITEC)**

Paul Tamayao ¹, Timothy A. McAllister ², Kim H. Ominski ³, Gabriel Ribeiro ⁴, Erasmus Okine ⁵, Atef Saleem ⁶, Emma J. J. McGeough ³

¹Department of Animal Science, University of Manitoba, ²Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ³University of Manitoba, ⁴Department of Production Animal Health, Faculty of Veterinary Medicine, University of Calgary, Calgary, AB T2N 4Z6, Canada, ⁵University of Lethbridge, ⁶South Valley University

10:00 a.m. 74 **Effects of particle size and levels of inclusion of selected engineered biocarbon on methane emission and rumen fermentation of barley-silage based diet in batch culture**

Paul Tamayao ¹, Timothy A. McAllister ², Kim H. Ominski ³, Gabriel Ribeiro ⁴, Erasmus Okine ⁵, Emma J. J. McGeough ³

¹Department of Animal Science, University of Manitoba, ²Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ³University of Manitoba, ⁴Department of Production Animal Health, Faculty of Veterinary Medicine, University of Calgary, Calgary, AB T2N 4Z6, Canada, ⁵University of Lethbridge

10:15 a.m. 82 **Effect of by-product feed supplementation of a hay-based diet on rumen fermentation, diet digestibility, methane production and protozoal population in an artificial rumen (RUSITEC).**

Sidonie P. Robinson ¹, Atef Saleem ², Kim H. Ominski ¹, Karin Wittenberg ¹, Timothy A. McAllister ³, Emma J. J. McGeough ¹

¹University of Manitoba, ²South Valley University, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

10:30 a.m. **CSAS Oral Student Competition: MS Break**

10:45 a.m. 86 **Evaluation of ensiled triticale varieties ('Taza' and 'Bunker' Triticosecale) and barley (Hordeum vulgare) on performance of backgrounding beef steers**

Brittany E. Ross ¹, John J. McKinnon ², Greg B. Penner ², Timothy A. McAllister ³, Kathy A. Larson ⁴, Jayakrishnan Nair ³, Herbert A. Lardner ²

¹University of Saskatchewan, ²Department of Animal and Poultry Science, University of Saskatchewan, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁴Department of Agricultural and Resource Economics, University of Saskatchewan

11:00 a.m. 85 **DNA parentage in multi-sire breeding groups and sire repeatability on replacement heifer performance**

Tess D. Mills ¹, Kathy A. Larson ², Mika Asai-Coakwell ³, Diego Moya ⁴, John R. Campbell ⁴, Herbert A. Lardner ³

¹University of Saskatchewan, ²Department of Agricultural and Resource Economics, University of Saskatchewan, ³Department of Animal and Poultry Science, University of Saskatchewan, ⁴Department of Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan

11:15 a.m. 83 **The impact of xylanase on arabinoxylan hydrolysis when included in corn or wheat based diets fed to swine**

Dakota L. Wightman ¹, Marta Izydorczyk ², Gemma Gonzalez-Ortiz ³, Denise A. Beaulieu ¹

¹University of Saskatchewan, ²Canadian Grain Commission, ³AB Vista

11:30 a.m. 84 **Effect of incorporating forage pea (c.v. Pisium sativum L.) into cereal hay on ruminal fermentation and apparent digestibility when fed to beef heifers**

Alex Pursley ¹, Bill Biligetu ², Tom Warkentin ¹, Herbert A. Lardner ³, Greg B. Penner ³

¹University of Saskatchewan, ²Department of Plant Sciences, University of Saskatchewan, ³Department of Animal and Poultry Science, University of Saskatchewan

11:45 a.m. 77 **Performance of growing pigs fed wheat-based diets containing wheat millrun and a multi-carbohydrase enzyme**

Agbee L. Kpogo ¹, Jismol Jose ¹, Atta K. Agyekum ¹, Denise A. Beaulieu ¹

¹University of Saskatchewan

12:00 p.m. 80 **Effects of macronutrient composition of milk replacer on body composition and intestinal development in neonatal dairy calves**

Anna C. Welboren ¹, Bayissa Hatew ², Leonel Leal ³, Javier Martin-Tereso ³, Michael A. Steele ⁴

¹University of Guelph, ²University of Alberta, ³Trouw Nutrition Research and Development, ⁴Department of Animal Biosciences, University of Guelph

12:15 p.m. 79 **Effect of source and dietary concentration of trace minerals on serum mineral status, ruminal pH, and ruminal volatile fatty acids in lactating Holstein dairy cows**

Nicole T. Briggs ¹, Bayissa Hatew ¹, Michael A. Steele ²

¹University of Alberta, ²Department of Animal Biosciences, University of Guelph

Production, Management and Environment Session I: Modeling

Chair: Adam Shreck, Feedlot Health Management Services

9:00 AM - 10:15 AM

Meeting Room 12A

9:00 a.m. 144 **A Modeling Framework to Assess the Impact of the Texas Beef Cattle Water Footprint on Livestock Sustainability**

Hector M. Menendez¹, Benjamin L. Turner², Luis O. Tedeschi³

¹Texas A&M, ²Texas A&M University-Kingsville, ³Texas A&M University

9:15 a.m. 143 **Impacts of soil carbon sequestration on life cycle greenhouse gas emissions in midwestern USA beef finishing systems**

Jason E. Rowntree¹, Paige Stanley², David Beede¹, Marcia DeLonge³, Michael Hamm¹

¹Michigan State University, ²University of California, Berkeley, ³Union of Concerned Scientists

9:30 a.m. 145 **Eco-efficiency of Northeast U.S. grass-fed beef systems**

Jasmine A. Dillon¹, Alan Rotz², Heather Karsten³

¹Colorado State University, ²Pasture Systems & Watershed Management Research Unit, USDA ARS, ³Department of Plant Sciences, Penn State University

9:45 a.m. 146 **Net Protein Contribution of Feedlots from 2006 to 2017**

Jessica Gilreath¹, Jason Sawyer², Ben P. Holland³, Kendall J. Karr³, Alyssa Word⁴, Tryon A. Wickersham¹

¹Texas A&M University, ²Texas A&M University-Kingsville, ³Cactus Research, ⁴Cactus Feeders

10:00 a.m. 142 **Human edible feed conversions of U.S. beef production**

Emily M. Andreini¹, Sara E. Place², James W. Oltjen¹

¹University of California, Davis, ²National Cattlemen's Beef Association

Swine Species Session: New Frontiers in Nutrition

Chair: Denise Beaulieu, University of Saskatchewan

9:00 AM - 11:15 AM

Meeting Room 12B

9:00 a.m. **Presentation of Award: Animal Industry Innovation Award**

Debra K. Aaron¹

¹University of Kentucky

9:05 a.m. 169 **Awardee Talk - Nutrition from a Risk Management Perspective**

Merlin D. Lindemann¹

¹University of Kentucky

9:30 a.m. 168 **Effects of forsythia suspensa extract supplemented in sows and piglets on performance, antioxidant status, serum immunity and intestinal morphology in weaned piglets**

Shenfei Long¹, Xiangshu Piao¹

¹College of Animal Science and Technology, China Agricultural University

9:45 a.m. 174 **Multi-enzyme solution improved growth performance of piglets fed a corn-SBM-DDGS based diet**

Victor G. Perez¹, Wenting Li², Jinsu Hong³, Bryan Rudolph⁴, Ana Lucia Pozzobon de Souza⁴, Janet C. Remus⁵, Tofuko A. Woyengo⁶

¹Dupont, ²Dupont- Nutrition&Biosciences, ³Department of Animal Science, South Dakota State University, ⁴DuPont Animal Nutrition, ⁵Danisco Animal Nutrition & Health - IFF,

⁶Assistant professor

10:00 a.m. 172 **Effects of net energy levels on feed intake pattern and growth performance of growing-finishing gilts monitored using a computerized feed intake recording system**

Zhikai Zeng¹, YaKuan Huang², Liqiang Zhu², Zhiyuan Chen², Z. J. Yuan², H Zeng², D. F. Sun², Z. Wang², Z. C. Yan²

¹New Hope Liuhe Co., Ltd, ²Swine research institution, New Hope Liuhe Co., Ltd,

10:15 a.m. **Swine Species Session: New Frontiers in Nutrition Break**

10:30 a.m. 173 **Characterization of urea transport mechanisms in the intestinal tract of growing pigs**

Daniel A. Columbus¹, Jack E. Krone¹, Miriam ter borgh², Katarzyna Burakowska³, Gillian Gratton⁴, Kimberley Hamonic⁴, Atta K. Agyekum³, Greg B. Penner⁴

¹Prairie Swine Centre, Inc., ²Prairie Swine Centre/Department of Animal and Poultry Science, University of Saskatchewan, ³University of Saskatchewan, ⁴Department of Animal and Poultry Science, University of Saskatchewan

10:45 a.m. 176 **Characterizing the Mycobiome in Piglets During the Weaning Transition**

Ann Arfken¹, Juli Frey¹, Timothy Ramsay², Katie L. Summers¹

¹USDA, ²ars-usda

11:00 a.m. 171 **Fecal microbiota transplant at weaning improves growth performance and alters fecal microbiome in pigs.**

Tsungcheng Tsai¹, Charles V. Maxwell¹, Jiangchao Zhao¹

¹University of Arkansas

Extension Education Session

Chair: Shane Gadberry, University of Arkansas

9:00 AM - 11:45 AM

Meeting Room 13A/B

9:00 a.m. 105 **Integrated Approach for Controlling Diseases and Parasites in Small Ruminants: Extension Education and Adoption**

Uma Karki¹, Lila B. Karki¹, Nar K. Gurung²

¹Tuskegee University, ²Department of Agricultural and Environmental Sciences, College of Agriculture, Environment, and Nutrition Sciences, Tuskegee University, Tuskegee, AL 36088, USA

9:15 a.m. 107 **Identifying Extension Programming Areas in Response to an Arkansas Beef Industry Assessment**

Shane Gadberry¹, Julie Robinson¹

¹University of Arkansas

9:30 a.m. 106 **Virginia Tech Graduate Extension Scholars program: Artificial insemination course for inmates.**

Nicholas W. Dias¹, Alvaro Sales², John Currin¹, Tracey Redifer¹, Hannah H. Scherer³, Vitor R G. Mercadante⁴

¹Virginia Tech, ²Animal and Poultry Sciences, Virginia Tech, Blacksburg, VA, USA.,

³Agricultural, Leadership, and Community Education. Virginia Tech, ⁴Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

9:45 a.m. 108 **Is there a relationship between future career choices and participation in youth livestock shows?**

Ronald J. Davis¹, Nar K. Gurung², Russell Johnson¹

¹Tuskegee University, ²Department of Agricultural and Environmental Sciences, College of Agriculture, Environment, and Nutrition Sciences, Tuskegee University, Tuskegee, AL 36088, USA

10:00 a.m. 104 **Leadership Styles of State Extension Specialists**

Amy Lawyer¹

¹University of Kentucky

10:15 a.m. **Extension Education Session Break**

10:30 a.m. 110 **The National Center for Applied Reproduction and Genomics (NCARG) in Beef Cattle**

David J. Patterson¹, Douglas S. Brown¹, Michael F. Smith¹, William R. Lamberson¹, Jeremy Taylor¹, Thomas E. Spencer¹, Scott E. Pooch¹, Jordan M. Thomas¹, Jared E. Decker¹

¹University of Missouri

10:45 a.m. 109 **The National Center for Applied Reproduction and Genomics (NCARG): Developing High-Impact Educational Programs for Beef Industry Participants**

Maria Haag¹, Jared E. Decker¹, Scott Brown¹, Michael F. Smith¹, William R. Lamberson¹, Jeremy Taylor¹, Thomas E. Spencer¹, Scott E. Pooch¹, Jordan M. Thomas¹, David J. Patterson¹

¹University of Missouri

11:00 a.m. 101 **National Center for Applied Reproduction and Genomics (NCARG) Evaluates Accuracy of Genomic Prediction in Commercial Angus Cattle**

Jared E. Decker¹, David J. Patterson¹, Brian Arisman², Troy N. Rowan¹, Jordan M. Thomas¹, Scott Brown¹, William R. Lamberson¹, Scott E. Pooch¹, Michael F. Smith¹, Thomas E. Spencer¹, Jeremy Taylor¹

¹University of Missouri, ²University of Kentucky, University of Missouri

11:15 a.m. 102 **The National Center for Applied Reproduction and Genomics (NCARG) in Beef Cattle: Supporting Improvements in Reproductive Management**
David J. Patterson¹, Scott Brown¹, Michael F. Smith¹, William R. Lamberson¹, Jeremy Taylor¹, Thomas E. Spencer¹, Scott E. Pook¹, Jordan M. Thomas¹, Jared E. Decker¹
¹University of Missouri

11:30 a.m. 103 **Mizzou Repro: Exploring short-form video communication on social media platforms to improve the reach of Extension**
Jordan M. Thomas¹, Rachael C. Bonacker², Katy S. Stoecklein³, Jaclyn N. Ketchum², Scott E. Pook¹, Anita M. Ellis⁴, Brianne E. Bishop⁵
¹University of Missouri, ²University of Missouri - Columbia, ³Division of Animal Sciences, University of Missouri, ⁴University of Missouri Extension - Callaway County, ⁵Quail Valley Veterinary Clinic

Cell Biology Symposium

Chair: Kristen Govoni, Dept. of Animal Science, University of Connecticut; Sarah Reed, Dept. of Animal Science, University of Connecticut
9:00 AM - 12:00 PM
Meeting Room 14

9:00 a.m. **Cell Biology Symposium Introduction**

9:05 a.m. 55 **Mitochondrial Metabolic Checkpoint, Stem Cell Aging and Rejuvenation**
Danica Chen¹
¹University of California Berkeley

9:45 a.m. 56 **Redox regulation of stallion spermatozoa and its impact in reproductive technologies**
Fernando J. Pena Vega¹
¹Universidad de Extremadura

10:25 a.m. **Cell Biology Symposium Break**

10:30 a.m. 57 **Carnosine prevents oxidative damage in myoblast cells derived from porcine skeletal muscle**
Marie-France Palin¹, Jérôme Lapointe¹, Claude Gariépy², Danièle Beaudry³, Claudia Kalbe⁴
¹Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada, St-Hyacinthe Research and Development Centre, ³Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre, ⁴Leibniz Institute for Farm Animal Biology, Institute of Muscle Biology & Growth

11:10 a.m. 54 **The Heat is On: Heat stress induces radical changes in skeletal muscle**
Joshua T. Selsby¹, Shanthy Ganesan¹, Robert P. Rhoads², Lance H. Baumgard¹
¹Iowa State University, ²Virginia Tech

11:50 a.m. 53 **Cell Biology Symposium Panel**

Contemporary and Emerging Issues Symposium I: Public Policy

Chair: Teresa Davis, USDA/ARS Children's Nutrition Research Center, Baylor College of
Medicine

9:00 AM - 12:00 PM

Meeting Room 9A

9:00 a.m. **Contemporary and Emerging Issues Symposium I Introduction**

9:05 a.m. 430 **Food Evolution Documentary**

10:35 a.m. **Contemporary and Emerging Issues Symposium I Break**

10:40 a.m. 72 **What's a nice girl like you doing in a documentary movie about
GMOs?**

Alison L. Van Eenennaam ¹

¹University of California, Davis Department of Animal Science

11:00 a.m. 428 **Values and Perception: Communicating Controversial Issues in
Animal Agriculture**

Jessica Eise ¹

¹Purdue University

11:20 a.m. 435 **Gen Z goes Venmo: a case study on communicating agriculture in a
cluttered, complex world**

Wes Jamison ¹

¹Palm Beach Atlantic University

11:40 a.m. **Contemporary and Emerging Issues Symposium I: Public Policy Panel
Discussion**

Meat Science and Muscle Biology Symposium

Chair: John Gonzalez, University of Georgia

9:00 AM - 12:00 PM

Meeting Room 18B

9:00 a.m. **Meat Science and Muscle Biology Symposium Introduction**

9:05 a.m. **Presentation of Award: Meats Research Award**

Gary Vogel ¹

¹Elanco Animal Health

9:10 a.m. 118 **Awardee Talk - Genomic control of fatty acid profile in beef**
Steven D. Shackelford¹, Andy King², Warren Snelling³, Tara G. McDanel⁴, Larry A. Kuehn³, Gary L. Bennett⁵, Tommy Wheeler⁶
¹USDA, Meat Animal Research Center, ²USDA-ARS-US Meat Animal Research Center, ³USDA ARS U.S. Meat Animal Research Center, ⁴USDA-ARS, U.S. Meat Animal Research Center, ⁵USDA, Agricultural Research Service, US Meat Animal Research Center, ⁶USMARC

9:40 a.m. 115 **Economics of enhancing the nutritive value of meat**
Glynn T. Tonsor¹
¹Kansas State University

10:15 a.m. 116 **Biology of altering the fatty acid profile of meat**
Derris D. Burnett¹
¹PhD

10:50 a.m. **Meat Science and Muscle Biology Symposium Break**

10:55 a.m. 117 **Effect of altering fatty acid profile on fresh meat color stability**
Kelsey J. Phelps¹
¹Cargill Protein

11:30 a.m. 114 **Effect of altering fatty acid profile on fresh meat palatability**
Jerrad F. Legako¹
¹Texas Tech University, Department of Animal and Food Sciences

Nonruminant Nutrition Session I: Amino Acid Nutrition

Chair: Guoyao Wu, Department of Animal Science, Texas A&M University

9:00 AM - 12:00 PM

Meeting Room 11A/B

9:00 a.m. **Presentation of Awards: AFIA Nonruminant Nutrition Research Award and Extension Award**
Ricardo Ekmay¹, Steven A. Zinn²
¹, ²Dept. of Animal Science, University of Connecticut

9:10 a.m. 120 **Awardee Talk: Amino acid and energy requirements of high producing sows**
Robert D. Goodband¹, Mariana Menegat¹, Kiah Gourley¹, Lori Thomas¹, Mike Tokach¹, Steve S. Dritz¹, Jason C. Woodworth¹, Joel M. DeRouchey¹
¹Kansas State University

9:40 a.m. 119 **Awardee Talk - Use of feed technology to improve the nutritional value of ingredients and diets for pigs**
Hans H. Stein¹
¹University of Illinois at Urbana-Champaign

10:10 a.m. 126 **Evaluation of true ileal amino acid digestibility of fermented soybean meal fed to nursery pigs**

Kibeom Jang¹, Y.C. Cheng¹, S. W. Kim¹

¹North Carolina State University

10:25 a.m. 129 **Effect of Ronozyme® WX supplementation on apparent and true ileal amino acid digestibility coefficients in broiler chicks fed varying levels of rice bran**

Richard B. Omidwura¹, Adebisi F. Agboola², Taiwo O. Makinde², Grace O. Oyebode²

¹University of Ibadan, Ibadan, Nigeria, ²University of Ibadan

10:40 a.m. 121 **Beta-hydroxy-beta-methylbutyrate (HMB) supplementation to mouse dams in gestation does not affect birth weight variation or growth of offspring**

Anna S. Clarke¹, Nathan Horn¹, Gerald C. Shurson², Christopher D. Faulk², Lee J. Johnston³

¹BioMatrix International, ²University of Minnesota, ³West Central Research and Outreach Center, University of Minnesota

10:55 a.m. **Nonruminant Nutrition Session I: Amino Acid Nutrition Break**

11:00 a.m. 125 **Supplementing extra dietary DL-methionine mitigates effects of higher stocking density on growth performance, meat quality, and health status of broiler chicks**

Andrew D. Magnuson¹, Guanchen Liu², Tao Sun², Samar Tolba², Adam C. Fahrenholz³, Lin Xi⁴, Rose Whelan⁵, Xingen Lei⁶

¹Cornell, ²Cornell University, ³Department of Poultry Science, North Carolina State University, ⁴North Carolina State University, ⁵Evonik Nutrition & Care GmbH, ⁶Cornell University College of Agricultural and Life Science

11:15 a.m. 128 **Additional dietary DL-methionine affects tissue redox and inflammation status of broiler chicks in response to high stocking density**

Andrew D. Magnuson¹, Guanchen Liu², Tao Sun², Samar Tolba², Rose Whelan³, Xingen Lei⁴

¹Cornell, ²Cornell University, ³Evonik Nutrition & Care GmbH, ⁴Cornell University College of Agricultural and Life Science

11:30 a.m. 127 **Dietary supplementation with glycine improves the post-weaning growth of low-birth-weight pigs**

Wenliang He¹, Erin A. Posey², Guoyao Wu¹

¹Department of Animal Science, Texas A&M University, ²USDA/ARS Children's Nutrition Research Center, Department of Pediatrics, Baylor College of Medicine

11:45 a.m. 130 **Comparison of amino acid digestibility in fish meal, porcine plasma, porcine red blood cell, and blood meal between broiler chickens and young pigs**

Chan Sol Park¹, Victor Naranjo², John K. Khun Kyaw Htoo³, Olayiwola Adeola¹

¹Purdue University, ²Evonik Nutrition & Care GmbH, ³Evonik

**Beef Species Symposium II: Handling Heat in Beef Cattle Production - Sponsored by
ARPAS**

Chair: Luis Tedeschi, Texas A&M University
9:00 AM - 12:20 PM
Meeting Room 16A

9:00 a.m. **Beef Species Symposium II Introduction**

9:10 a.m. 44 **Physiology of heat stress**

Robert P. Rhoads¹

¹Virginia Tech

9:55 a.m. 45 **The impact of heat stress on feedlot operations; design and
management options to reduce its impact**

Frank Mitloehner¹

¹UC Davis

10:40 a.m. **Beef Species Symposium II Break**

10:55 a.m. 46 **The impact of heat stress on feedlot operations; nutritional and
breeding options to reduce its impact.**

Jenny Jennings¹

¹Texas A&M AgriLife Research

11:40 a.m. **Beef Species Symposium II Roundtable**

**Breeding and Genetics Symposium I: How genomic selection has changed livestock
breeding**

Chair: Tom Rathje, DNA Swine Genetics
9:00 AM - 12:30 PM
Ballroom F

9:00 a.m. **Breeding and Genetics Symposium I: How genomic selection has
changed livestock breeding Introduction**

9:05 a.m. 49 **Current status of genomic selection**

Ignacy Misztal¹

¹University of Georgia

9:35 a.m. 50 **Genomic Selection in the dairy industry: excitement, challenges, and
future directions**

Tom Lawlor¹

¹US Holstein Association

10:05 a.m. **Breeding and Genetics Symposium I Break I**

10:20 a.m. 51 **ASAS-EAAP Exchange Speaker Talk: Is genomic selection beneficial for the pig industry?**

Egbert Knol¹

¹Topigs Norsvin Research Centre

10:50 a.m. 52 **Genomic selection in the beef industry: Current achievements and future directions**

Daniel W. Moser¹, Stephen P. Miller¹, Kelli J. Retallick², Duc Lu³, Larry A. Kuehn⁴

¹Angus Genetics Inc., ²American Angus Association, ³American Angus Association, ⁴USDA ARS U.S. Meat Animal Research Center

11:20 a.m. **Breeding and Genetics Symposium I Break II**

11:30 a.m. 47 **Genomic Selection and Gene Editing in Plant Breeding – An Industry Perspective**

Makram Geha¹

¹Corteva Agriscience

12:00 p.m. 48 **The impact of new technologies on livestock breeding; what's next?**

Jack C.M. Dekkers¹

¹Department of Animal Science, Iowa State University

ASAS New Board Orientation

9:15 AM - 10:45 AM

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Animal Health Session I

Chair: Eveline Ibeagha-Awemu, Agriculture and Agri-Food Canada

9:30 AM - 11:15 AM

Meeting Room 9C

9:30 a.m. 15 **Dietary supplementation with lactic acid and glutamine improve intestinal digestive and regulate intestinal microflora in weaning piglets**

Ping Zheng¹, Junjie Jiang¹, Bing Yu¹, Jun He¹, Jie Yu¹, Xiangbing Mao¹, Yuheng Luo¹, Daiwen Chen¹

¹Sichuan Agricultural University

9:45 a.m. 12 **Effects of excess iron and dietary fat on lipid metabolism**

Wan Ma¹

¹Zhejiang University

10:00 a.m. 13 **Lipocalin 2 exerts protective activity by alleviating inflammatory responses**

Shuhui Li¹

¹College of Animal Science, Zhejiang University

10:15 a.m. 10 **Occurrence of Mycotoxins in Wheat Middlings**

Paige N. Gott¹, Erika G. Hendel², Shelby M. Curry², Ursula Hofstetter³, G. Raj Murugesan²

¹BIOMIN America Inc., ²BIOMIN America Inc., ³BIOMIN Holding GmbH

10:30 a.m. 11 **The effect of tissue depth and day of healing on effectiveness of near infrared spectroscopy to predict quantitative differences in histological imagery of superficial burn scars in cattle.**

Doug R. Tolleson¹, Laura Bryan², Canaan Whitfield², Thomas B. Hairgrove³

¹Texas A&M University, ²Texas A&M College of Veterinary Medicine & Biomedical Sciences, ³Texas A&M AgriLife Extension

10:45 a.m. 17 **Combining two probiotic strains with oligofructose-enriched inulin abolishes their benefits against Salmonella Typhimurium in piglets**

Agustina Rodríguez Sorrento¹, Lorena Castillejos², Glória Cifuentes Orjuela³, María Rodríguez Palmero³, José Antonio Moreno Muñoz³, Susana María Martín Orúe¹

¹Universitat Autònoma de Barcelona, ²Servei de Nutrició i Benestar Animal, Dept. de Ciència Animal i dels Aliments, UAB, 08193, ³Laboratorios Ordesa S.L.

11:00 a.m. 16 **Standardized phytomolecules improve foot and mouth disease vaccine response in grower pigs**

Alexandra Blanchard¹, Josselin le Cour Grandmaison¹, In Ho Kim², Yong Min Kim²

¹Pancosma SA, ²Dankook University

Companion Animal Symposium I: Nutrition and Health: Companion Animal Applications

Chair: Jennifer Adolphe, ADM

9:30 AM - 12:15 PM

Meeting Room 15

9:30 a.m. **Companion Animal Symposium I Introduction**

9:45 a.m. 58 **Functional nutrition to modulate the immune response**

Elizabeth A. Bobeck¹

¹Iowa State University

10:15 a.m. 59 **Effect of Dietary Intervention on Gut Microbiome and Microbial-Derived Metabolites**

Jan S. Suchodolski¹

¹Department of Small Animal Clinical Sciences, Texas A&M University

10:45 a.m. **Companion Animal Symposium I Break**

11:00 a.m. 60 **Nutrition and Pet Aging: Principles Inform Practice**

David Waters¹

¹Center for Exceptional Longevity Studies, Gerald P. Murphy Cancer Foundation

11:30 a.m. 61 **Nutritive feed ingredients that pose toxicological potential**

Ray A. Matulka¹

¹Burdock Group Consultants

12:00 p.m. **Companion Animal Symposium I Q&A**

Production, Management and the Environment Session II: Reproduction

Chair: Zachary Paddock

11:30 AM - 12:30 PM

Meeting Room 12B

11:30 a.m. 156 **Structural patterns in dairy cow efficiency responses to supplementation**

Douglas M. Liebe¹, Tanner P. Price¹, Kristy M. Daniels¹, Robin R. White²

¹Virginia Tech, ²Virginia Tech School of Animal Sciences

11:45 a.m. 155 **Impacts of post-weaning growth rate on reproductive development and maternal productivity of replacement beef heifers**

Kelsey Schubach¹, Reinaldo F. Cooke¹, Alice P. Brandão¹, Rodrigo Marques², David W. Bohnert³

¹Texas A&M University, ²Oregon State University, ³Oregon State University; EOARC

12:00 p.m. 157 **Impact of weaning strategy on heifer performance and reproductive development**

Grace C. Ott¹, Rebecca K. Poole², Matt H. Poore³, Carrie L. Pickworth²

¹North Carolina State University, Department of Animal Science, ²North Carolina State University, ³NC State University

12:15 p.m. 158 **Comparison of Different Presynch-based Synchronization Protocols in Postpartum Dairy Cattle**

Abid Hussain SHAHZAD¹, Shaista Abbas², lahtisham Khan², raafia safdar³, Ali Abbas³, Ali Murtaza²

¹Clinical Sciences, ²CVAS, Jhang, ³Livestock and Dairy Development Department, Punjab

Poster Session II

12:00 PM - 2:00 PM

Ballroom D

12:00 p.m. PSII-2 **Application of partial least squares regression to predict feed efficiency and intake using feeding behavior patterns in growing steers and heifers**

Jocelyn R. Johnson¹, Gordon E. Carstens¹, Ira Parsons¹, Luis O. Tedeschi¹

¹Texas A&M University

12:00 p.m. PSII-18 **Awardee Poster: Direct fed microbial supplementation on apparent nutrient digestibility, visualization of the top three fecal microbial isolates, and blood metabolites in the moderately exercised horse**

Courtney P. Heaton¹, Clay A. Cavinder¹, Trent Smith¹

¹Mississippi State University

12:00 p.m. PSII-1 **Blood metabolomics for biomarker discovery and the diagnosis of Bovine Respiratory Disease**

claudia R. Blakebrough-Hall ¹, Anthony Dona ², Michael D'occhio ¹, Joe McMeniman ³, Luciano A. Gonzalez ⁴

¹School of Life and Environmental Sciences, Faculty of Science, The University of Sydney, Camden, NSW, Australia, ²Kolling Institute of Medical Research, Faculty of Medicine and Health, The University of Sydney, Australia, ³Meat and Livestock Australia, Brisbane, QLD, Australia, ⁴The University of Sydney

12:00 p.m. PSII-9 **Body core and skin temperatures in suckling piglets measured by infrared thermography and thermometry methods**

Simone M. Schmid ¹, Wolfgang Büscher ², Julia Steinhoff-Wagner ¹

¹Institute of Animal Science, University of Bonn, Germany, ²Institute of Agricultural Engineering, University of Bonn, Germany

12:00 p.m. PSII-4 **Changes in body temperature of lot-fed Bos taurus and Bos indicus steers during a heat wave**

Stephanie L. Sammes ¹, Angela M. Lees ¹, Judy A. Cawdell-Smith ¹, John B. Gaughan ¹

¹School of Agriculture and Food Sciences, The University of Queensland, Gatton, Qld., Australia, 4343

12:00 p.m. PSII-26 **Changes in growth performance, cytokine profile and eating and drinking behaviors of growing pigs subjected to an induced heat stress**

Lauren E. Anderson ¹, Jonathan P. Holt ²

¹North Carolina State University, ²NCSU

12:00 p.m. PSII-12 **Comparison of fine needle aspiration and tissue sections to determine Sertoli and germ cell counts in prepubertal beef bulls**

Kevin K. Sedivec ¹, Jordan Flaten ², Cody Wieland ³, Stephanie Becker ³, Carl R. Dahlen ⁴, Nicolas Negrin Pereira ⁵

¹North Dakota State University - Central Grasslands Research Extension Center, ²NDSU Animal Sciences, ³CGREC, NDSU, ⁴North Dakota State University, Department of Animal Sciences, ⁵NDSU

12:00 p.m. PSII-34 **Comparison of the activity level of high and low residual feed intake beef steers**

Sheyenne M. Augenstein ¹, Emily M. Andreini ¹, James W. Oltjen ¹, Roberto D. Sainz ¹

¹University of California, Davis

12:00 p.m. PSII-22 **Comparison of the meat quality traits of crossbred pigs and the Large Black pigs**

Yongjie Wang ¹, Keshari Thakali ², Sarah Shelby ¹, Jason Apple ³, Yan Huang ¹

¹University of Arkansas, ²University of Arkansas Medical School, ³University of Arkansas Division of Agriculture

12:00 p.m. PSII-23 **Concurrent Supplementation of n-3 Polyunsaturated Fatty Acids Impairs C2C12 from the Acquisition of Functional Brown Adipocyte Phenotype by Negatively Affecting the Mitochondrial Thermogenesis**

Saeed Ghnaimawi ¹, Jamie Baum ¹, Rohana Liyanage ¹, Yan Huang ¹

¹University of Arkansas

12:00 p.m. PSII-5 **Corn-Expressed Phytase Improved the Growth Performance, Nutrients Digestibility and Bone Mineral Density of Nursery Pigs Fed with Low Protein, Calcium and Phosphorous Diets**

Cedrick n. Shili ¹, Jonathan N. Broomhead ², Adel Pezeshki ¹

¹Department of Animal and Food Sciences, Oklahoma State University, Stillwater, OK 74078, ²Agrivida

12:00 p.m. PSII-6 **Deep Learning image segmentation for extraction of body measurements and prediction of body weight in Nile Tilapia**

Arthur Fernandes ¹, Erika R. de Alvarenga ², Tiago L. Passafaro ³, Fernando B. lopes ³, Gabriel F. O. Alves ², Vikas Singh ³, Eduardo M. Turra ²

¹Cobb-Vantress, ²UFMG, ³UW-Madison

12:00 p.m. PSII-27 **Determining Genetic Variation in Sheep with Flock54: a Genotyping by Sequencing Panel**

Jacob W. Thorne ¹, Lesa Eidman ², Mingrui Duan ³, Samuel S. Hunter ³, Kimberly M. Davenport ³, Brenda M. Murdoch ³

¹Texas A&M AgriLife Research, ²Superior Farms, ³University of Idaho

12:00 p.m. PSII-37 **Determining the Possible Anthelmintic Properties of Allicin and Pumpkin Seed Oil For Mitigation of Anthelmintic Resistance Found in Gastrointestinal Nematodes Infecting Ruminants.**

Collin Hayes ¹, Elizabeth Benavides ¹, Malorie Diamond ¹, Trixie L. Wetmore ¹, Ken Mix ¹

¹Texas State University

12:00 p.m. PSII-33 **Differences in prostaglandin release in cows with high vs low circulating concentrations of pregnancy associated glycoproteins**

Sydney T. Reese ¹, Kelsey Schubach ¹, Alice P. Brandão ¹, Sarah West ¹, Meaghan M. O'Neil ¹, Rodolfo C. Cardoso ¹, Gary L. Williams ², Ky G. Pohler ¹

¹Texas A&M University, ²Animal Reproduction Laboratory, Texas A&M AgriLife Research, Beeville, TX; Department of Animal Science, Texas A&M University, College Station, TX

12:00 p.m. PSII-36 **Effect of cyclic monensin feeding on intake and ruminal fermentation parameters in steers consuming low-quality forage**

Natasha L. Bell ¹, Kayla Hook ², Kendrah De Leon ², Alicia Hernandez ²

¹Texas A&M University Kingsville, ²Texas A&M University-Kingsville

12:00 p.m. PSII-13 **Effects of antibiotics on serum metabolomic profiles in weanling pigs experimentally infected with a pathogenic *E. coli***

Kwangwook Kim ¹, Yijie He ², Cynthia N. Jinno ¹, Minh Song ³, Peng Ji ¹, Yanhong Liu ¹

¹University of California, Davis, ²Department of Animal Science, University of California, Davis, ³Chungnam National University

12:00 p.m. PSII-40 **Effects of combining nose flap weaning with short-term creep feeding of beef calves on cow and calf performance**

Kendi Tjardes¹, Katy Lippolis¹, Christopher A. Clark¹

¹Iowa State University

12:00 p.m. PSII-39 **Effects of electrostatic spray and natural antioxidants on sensory quality and color of grass- finished beef strip steaks**

Dishnu Sajeev¹, Hudson Thames¹, Harper Cobb¹, Alexander Holtcamp¹, Alexandria Cavender², Amilton De Mello², Thu Dinh¹

¹Mississippi State University, ²University of Nevada, Reno

12:00 p.m. PSII-32 **Effects of feeding 60% dried distillers grains plus solubles or the equivalent sulfur as calcium sulfate on hydrogen sulfide gas production in the rumen**

Cierrah J. J. Kassetas¹, Bryan W. Neville², Joel S. Caton³, Kacie L. McCarthy⁴, Kevin K. Sedivec⁵, Matthew S. Crouse³, Carl R. Dahlen⁶

¹USDA-NIFA, ²USDA, ARS, U.S. Meat Animal Research Center, ³North Dakota State University, ⁴University of Nebraska-Lincoln, ⁵North Dakota State University - Central Grasslands Research Extension Center, ⁶North Dakota State University, Department of Animal Sciences

12:00 p.m. PSII-20 **Effects of maternal nutrient restriction during gestation on bovine serum microRNA abundance**

Keelee J. McCarty¹, Andrea N. DeCarlo¹, Ralph Ricks¹, Nathan Clemson University Long¹, Nathan Long¹

¹Clemson University

12:00 p.m. PSII-15 **Effects of Oxidized Feed on Productivity, Plasma Oxidative Stress, and Meat Quality of Broilers**

Wendy Attuquayefio¹, Byungrok R. MIN¹, Anuradha Punchihewage Don¹, Jennifer Timmons¹, Sang-Hyon OH¹, Dong Ahn²

¹University of Maryland Eastern Shore, ²Iowa State University

12:00 p.m. PSII-8 **Effects of polyamines and trenbolone acetate on proliferation rates of murine myoblasts**

Laura A. Motsinger¹, Nikole E. Ineck¹, Brynne A. Udy¹, Chris L. Erickson¹

¹Utah State University

12:00 p.m. PSII-29 **Identification of serum proteins that interact with extracellular histones in feedlot cattle**

Victor V. Flores¹, Jennifer A. Hernandez Gifford¹, Julia Matera², Steven Hartson³, Blake K. Wilson³, Stephanie D. Byrum⁴, Craig A. Gifford¹

¹New Mexico State University, ²University of Missouri Health, ³Oklahoma State University, ⁴University of Arkansas for Medical Sciences

12:00 p.m. PSII-28 **Impact of commingling on feedlot steer productivity**

Amanda J. Hubbard¹, Jason Sawyer², Reinaldo F. Cooke¹, Courtney L. Daigle³

¹Texas A&M University, ²Texas A&M University-Kingsville, ³Department of Animal Science, Texas A&M University

12:00 p.m. PSII-17 **Impact of Forage Diversity on Animal Production, Forage Productivity and Nutritive Value, Emissions, and Soil C/N Cycling**

Logan R. Thompson ¹, Isabella F. de Faria Maciel ², Kim Cassida ², Jason E. Rowntree ¹
¹Michigan State University, ²MSU

12:00 p.m. PSII-10 **In vitro simulation of biofilm development and detachment in dairy cow troughs within the first 7 days after cleaning**

Jason J. Hayer ¹, Celine Heinemann ¹, Simone M. Schmid ¹, Benedikt G. Schulze Dieckhoff ¹, Sydney Stewart ², Julia Steinhoff-Wagner ¹
¹Institute of Animal Science, University of Bonn, Germany, ²Department of Animal Science, Oklahoma State University, USA

12:00 p.m. PSII-14 **Influence of recent postpartum weight variation on milk production, cow and calf performance and reproductive efficiency of beef cows in Southern Brazil**

Claudia Faccio Demarco ¹, Marcelo Alves Pimentel ², Cassio Cassal Brauner ³
¹University of Wyoming, ²Universidade Federal de Pelotas, ³NUPEEC - UFPel

12:00 p.m. PSII-42 **Kinetics of methanogenesis and acetogenesis under normal rumen conditions**

Jarvis Scott ¹, Richard Kohn ²
¹University of Maryland - College Park, ²University of Maryland - College Park

12:00 p.m. PSII-31 **Manipulation of steam-flaked corn bulk density during grain adaptation phase of beef steers: ruminal fermentation characteristics and feeding behavior**

Carly A. Hoffmann ¹, Darren D. Henry ¹
¹Texas Tech University

12:00 p.m. PSII-35 **Melatonin supplementation and restricted nutrition do not affect chorionic somatomammotropin (CSH) concentration in ovine placenta from mid- to late- gestation**

Hanaa Mansour ¹, Caleb O. Lemley ², Russell V. Anthony ³, Kendall C. Swanson ⁴, Anna T. Grazul-Bilska ⁴, Hanaa Mansour ¹
¹NDSU, ²Mississippi State University, ³Colorado State University, ⁴North Dakota State University

12:00 p.m. PSII-11 **RNA sequencing analysis reveals differentially expressed genes and novel upstream transcriptional regulators in porcine longissimus dorsi muscle affected by dietary lysine restriction**

Ying Wang ¹, Huaijun Zhou ¹, Shengfa T. Liao ²
¹Department of Animal Science, University of California, Davis, CA, USA, ²Mississippi State University

12:00 p.m. PSII-19 **Stallion exposure fails to alter circulating LH concentrations or hasten ovulation in seasonally anestrus mares**

Chelsea D. Sinclair ¹, Jeffrey Stevenson ¹, Abigail Jager ¹, Nathan Long ², Timothy Rozell ¹, Joann Kouba ¹
¹Kansas State University, ²Clemson University

12:00 p.m. PSII-38 **The effect of clitoral stimulation post fixed-time insemination in Bos indicus beef cattle.**

Ramiro V. Oliveira ¹, Gustavo Azevedo de Mello ², Victor Mendonça Pereira ³, Jose Luiz M. Vasconcelos ⁴, Reinaldo F. Cooke ¹, Ky G. Pohler ¹

¹Texas A&M University, ²Pontifical Catholic University of Minas Gerais, ³RuralTec Goias, ⁴UNESP

12:00 p.m. PSII-25 **The effect of the organic acid on the bulls' sperm quality**

Polina Anipchenko ¹, Kirill Plemyashov ², Georgiy Nikitin ³, Anastasia A. Nikitina ², Sergey Shabunin ⁴

¹St. Petersburg State University of Veterinary Medicine, ²Saint Petersburg State University of Veterinary Medicine, ³Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine", ⁴State scientific institution All-Russian veterinary research institute of pathology, pharmacology, and therapy of the Russian academy of agricultural science

12:00 p.m. PSII-30 **The genetics of functional teats in swine**

Audrey L. Earnhardt ¹, Mark Knauer ¹

¹North Carolina State University

12:00 p.m. PSII-16 **Thermal sensor-based multiple object tracking system for estrus detection in Korean native beef cattle**

HyoKon Kang ¹, Gee-Tae Park ¹, YoungJun Na ¹, HyounChul Kwon ¹, SANGRAK LEE ¹

¹Konkuk University

12:00 p.m. PSII-24 **Towards a better understanding of the gut microbiome functions in the swine production: extensive cultivation of the swine gut microbiome from different growth stages.**

Xiaofan Wang ¹, Xiaoyuan Wei ², Feilong Deng ², Tsungcheng Tsai ¹, Charles V. Maxwell ¹, Jiangchao Zhao ³

¹University of Arkansas, ²Department of Animal Science, Division of Agriculture, ³Department of Animal Science, University of Arkansas, Fayetteville, AR, 72701

12:00 p.m. PSII-7 **Uterine Artery Hemodynamics and Placentome Quantification during Maternal Nutrient Restriction in Beef Cattle.**

Dana S. Reid ¹, Caleb O. Lemley ², Kalisha Yankey ³, Derris D. Burnett ⁴

¹Department of Animal and Dairy Sciences, Mississippi State University, ²Mississippi State University, ³Animal and Dairy Sciences, Mississippi State University, ⁴PhD

12:00 p.m. PSII-21 **Vaginitis incidence and effects on fertility of beef females enrolled on estrus synchronization protocols using a controlled internal drug release (CIDR) device.**

Nicholas W. Dias ¹, Alvaro Sales ², Claire L. Timlin ³, Stefania Pancini ¹, John Currin ¹, Vitor R G. Mercadante ⁴

¹Virginia Tech, ²Animal and Poultry Sciences, Virginia Tech, Blacksburg, VA, USA., ³Animal and Poultry Sciences, Virginia Tech, ⁴Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

JAS and TAS Section Editors' Lunch

12:30 PM - 2:00 PM

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Animal Health Session II

Chair: Milena Saqui-Salces, University of Minnesota

2:00 PM - 3:30 PM

Meeting Room 14

2:00 p.m. 24 **Validation of Swine Enteroids as a Model to Study Lawsonia intracellularis Pathogenesis**

Ramya Lekha Medida¹, Talita P. Resende², Connie Gebhart¹, Milena Saqui-Salces¹

¹University of Minnesota, ²University of Minnesota, Twin Cities

2:15 p.m. 19 **Effects of glutathione on growth performance and intestinal health of piglets**

Xianyong Ma¹, Zhimei tian¹, yiyang cui¹, zhichang liu¹, huijie lu¹

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences; State Key Laboratory of Livestock and Poultry Breeding; Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture; Guangdong Public Laboratory of Animal Breeding and Nutrition; Guangdong Engineering Technology Research Center of animal Meat quality and Safety Control and Evaluation

2:30 p.m. 20 **Antibody response, lesions, and performance do not differ between injection site (ischioanal fossa or neck) after multivalent modified-live virus vaccination in Jersey steers**

Hannah A. Seiver¹, Ty E. Lawrence¹, Nathan F. Meyer², Dexter J. Tomczak¹, Taylor M. Smock¹, Dicky D. Griffin¹, John T. Richeson¹

¹West Texas A&M University, ²Boehringer Ingelheim Animal Health USA Inc.

2:45 p.m. 23 **Differential microRNA expression in jejunal tissue and jejunal lymph nodes following naturally occurring Mycobacterium avium subspecies paratuberculosis infection in Holstein cows**

Eveline M. Ibeagha-Awemu¹, Mengqi Wang², Nathalie Bissonnette¹, Philip Griebel³, Pier-Luc Dudemaine¹, Duy N. Do⁴, Yongjiang Mao⁵

¹Agriculture and Agri-Food Canada, ²Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre; College of Animal Science and Technology, Yangzhou University, ³VIDO-Intervac, University of Saskatchewan, ⁴Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre, ⁵College of Animal Science and Technology, Yangzhou University

3:00 p.m. 21 **Profiling sow vaginal and fecal and piglet gastrointestinal microbiome and the passage of sow microbiome to their progeny from birth to weaning**

Huyen Tran¹, Brenda de Rodas¹, Manohar M. Lahoti¹, Timothy J. J. Johnson²

¹Purina Animal Nutrition, ²University of Minnesota

3:15 p.m. 22 **Biological quality of drinking water for dairy cows - A risk oriented evaluation of influencing factors**

Jason J. Hayer¹, Benedikt G. Schulze Dieckhoff¹, Celine Heinemann¹, Julia Steinhoff-Wagner¹

¹Institute of Animal Science, University of Bonn, Germany

Nonruminant Nutrition Session II: Enzyme Application

Chair: Tofuko Woyengo, Assistant professor

2:00 PM - 3:45 PM

Meeting Room 11A/B

2:00 p.m. 134 **The efficacy of a *Buttiauxella* sp. phytase relative to diets with graded levels of inorganic phosphate in piglets**

Rosil Lizardo¹, Deepak E Velayudhan², Boris Villca³, Leon Marchal⁴, Yueming Dersjant-Li⁵

¹IRTA, ²Danisco Animal Nutrition, IFF, ³Institut de Recerca I Tecnologia Agroalimentàries, ⁴DuPont Nutrition and Biosciences, ⁵Danisco Animal Nutrition (IFF)

2:15 p.m. 136 **Nutritive value of phytase- and multi-carbohydrase-supplemented carinata meal for growing pigs**

Jinsu Hong¹, Jung Wook Lee², Dan Pettersson³, Tofuko A. Woyengo⁴

¹Department of Animal Science, South Dakota State University, ²South Dakota State University, ³Novozymes A/S, ⁴Assistant professor

2:30 p.m. 137 **Effects of dietary supplementation with xylanase and probiotics on growth performance and gut health of newly weaned pigs**

Marcos Elias Duarte¹, J. Tyus², S. W. Kim¹

¹North Carolina State University, ²BioResource International, Inc

2:45 p.m. 131 **Alleviation of piglet allergic reaction to soybean meal via supplementation with protease**

Sangwoo Park¹, Jung Wook Lee², Aaron J. Cowieson³, Guenter Pappenberger³, Tofuko A. Woyengo⁴

¹Chungnam National University, ²South Dakota State University, ³DSM Nutritional Products, ⁴Assistant professor

3:00 p.m. 133 **Porcine in vitro degradation and fermentation characteristics of heat-pretreated and multi-enzyme-supplemented soybean hulls**

Cienna J. Boss¹, Jung Wook Lee¹, Rob Patterson², Tofuko A. Woyengo³

¹South Dakota State University, ²CBS Bio-Platforms Inc., ³Assistant professor

3:15 p.m. 135 **FH and FGSH prepared from fish skin gelatin using ginger protease alleviates DSS-induced Colitis via Nrf2 pathway**

Zhao Deng¹, Jian Peng¹

¹Huazhong Agricultural University

3:30 p.m. 132 **Short-Term and Long-Term Intake of High-Level Pea Fiber Specifically Affects the Bacterial Community and Metabolites in the Cecum of Pigs**
Yuheng Luo ¹, Hong Chen ¹, Bing Yu ¹, Jun He ¹, Ping Zheng ¹, Xiangbing Mao ¹, Junqiu Luo ¹, Zhiqing Huang ¹, Daiwen Chen ¹
¹Sichuan Agricultural University

3:45 p.m. 90 **Effect of supplemental threonine on growth performance of pigs challenged with Salmonella typhimurium and fed high fiber diets**
Michael O. Wellington ¹, Atta K. Agyekum ², Kimberley Hamonic ³, John K. Khun Kyaw Htoo ⁴, Andrew G. Van Kessel ², Daniel A. Columbus ¹
¹Prairie Swine Centre, Inc., ²University of Saskatchewan, ³Department of Animal and Poultry Science, University of Saskatchewan, ⁴Evonik

Production, Management and Environment Session III: Feeding

Chair: Eric Bailey, University of Missouri

2:00 PM - 4:30 PM

Meeting Room 9A

2:00 p.m. **Presentation of Award: Animal Management Award**
Meghan Wulster-Radcliffe ¹
¹ASAS

2:05 p.m. 154 **Awardee Talk – Tares Among the Wheat: Sericea Lespedeza Invasion of Native Tallgrass Prairie**
KC Olson ¹
¹Kansas State University

2:30 p.m. 149 **Analysis of culling pattern during breeding cycle and lifetime production from the aspect of culling reasons for gilts and sows in southwest China**
Chao Wang ¹, Jian Peng ¹
¹Huazhong Agricultural University

2:45 p.m. 148 **Residual feed intake and body weight gain relate to feeding behavior in Nellore bulls: Implications for performance and maintenance requirements**
Ana Clara B. Menezes ¹, Sebastião Valadares Filho ², Pedro Benedetti ², Marcos Pacheco ², Pauliane Pucetti ², Breno Silva ², Diego Zanetti ³, Fabyano Silva ⁴, Mário Paulino ², Mario Luiz Chizzotti ⁵, Tammi L. Neville ⁶, Joel S. Caton ⁷
¹UFV - Brazil /NDSU - USA, ²UFV, ³IF Sul de Minas, ⁴Federal University of Viçosa, ⁵Universidade Federal de Viçosa, ⁶USDA- NIFA, ⁷North Dakota State University

3:00 p.m. 147 **Changes in body temperature of lot-fed Bos taurus and Bos indicus steers during a heat wave**
Stephanie L. Sammes ¹, Angela M. Lees ¹, Judy A. Cawdell-Smith ¹, John B. Gaughan ¹
¹School of Agriculture and Food Sciences, The University of Queensland, Gatton, Qld., Australia, 4343

3:15 p.m. **Management, Production and Environment Session III Break**

3:30 p.m. 151 **Use of an automated computer vision system to predict body weight and average daily gain in beef cattle in different phases of growth development**
Alexandre Cominotte ¹, Arthur Fernandes ², Joao R. R. Dorea ³, Guilherme JM Rosa ³, Otávio Machado-Neto ⁴

¹University of Wisconsin - Madison, ²Cobb-Vantress, ³University of Wisconsin-Madison,

⁴College of Veterinary Medicine and Animal Science of São Paulo State University.

3:45 p.m. 152 **Effects of mineral supplementation on performance and serum mineral status in beef steers grazing annual ryegrass**

J D. Rivera ¹, Rhonda C. Vann ²

¹MSU-MAFES White Sand Branch Beef Unit, ²Mississippi State University

4:00 p.m. 150 **Administering an appeasing substance to Bos indicus-influenced beef cattle at weaning and feedlot entry**

Allison Millican ¹, Reinaldo F. Cooke ¹, Alice P. Brandão ¹, Thiago Schumacher ², Osvaldo Sousa ¹, Thais Castro ³, Bruno I. Cappelozza ³

¹Texas A&M University, ²São Paulo State University (UNESP), ³Nutricorp

4:15 p.m. 153 **Creation of a feed composition database: Machine learning techniques for automated classification of corn grain products, preliminary results**

Andres A. Schlageter-Tello ¹, Phil S. Miller ²

¹National Animal nutrition Program, University of Kentucky, ²Dept. of Animal Science, University of Nebraska

Immunometabolism Symposium: From concepts to applications in animal production

Chair: Ignacio Ipharraguerre, Christian Albrechts University of Kiel; Alexandra Blanchard, Pancosma SA

2:00 PM - 4:45 PM

Meeting Room 9C

2:00 p.m. **Immunometabolism Symposium Introduction**

2:05 p.m. 67 **Immunometabolism – emerging concepts and potential applications in livestock**

Barry J. Bradford ¹

¹Kansas State University

2:35 p.m. 70 **Immune activation and glucose utilization**

Greg B. Penner ¹

¹Department of Animal and Poultry Science, University of Saskatchewan

3:05 p.m. 68 **ASAS-EAAP Exchange Speaker Talk: Natural feed additives enhancing innate immunity: the gateway to sustainable animal health**

Johanna Fink-Gremmels ¹

¹Utrecht University

3:35 p.m. **Immunometabolism Symposium Break**

3:45 p.m. 69 **The ability of an artificial sweetener (Sucram®) to influence microbial community structure in the rumen papillae and content through the production of microbial-based neurochemicals**

Mark Lyte ¹, Lucas R. Koester ¹, Stephan Schmitz-Esser ¹

¹Iowa State University

4:15 p.m. 71 **ASAS-EAAP Exchange Speaker Talk: Regulation of pathogen-specific immune function by dietary phytonutrients**

Andrew R. Williams ¹

¹University of Copenhagen

ASAS Publications Symposium: A how to guide to publishing

Chair: Kristen Govoni, Dept. of Animal Science, University of Connecticut

2:00 PM - 5:00 PM

Meeting Room 16B

2:00 p.m. 27 **Surviving the review process: an editor's perspective**

James Sartin ¹

¹American Society of Animal Science

2:40 p.m. 28 **Editorial Pet Peeves**

Sally Johnson ¹

¹Virginia Polytechnic and State Institution

3:15 p.m. 29 **How to make nutrition tables and figures that work**

Hans H. Stein ¹

¹University of Illinois at Urbana-Champaign

3:35 p.m. 30 **Copyright versus Plagiarism**

Meghan Wulster-Radcliffe ¹

¹ASAS

3:55 p.m. 26 **Do We Need a Plan B for Plan S?**

Teresa A. Davis ¹

¹USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine

4:30 p.m. 31 **ASAS Publications-the Big Picture**

Kristen E. Govoni ¹

¹Dept. of Animal Science, University of Connecticut

Companion Animal Symposium II: Comparative Animal Nutrition

Chair: Liz Koutsos, EnviroFlight

2:00 PM - 5:00 PM

Meeting Room 15

2:00 p.m. **Companion Animal Symposium II Introduction**

2:15 p.m. 65 **Sustainability of Fish-Derived Feed Inputs: An Ecological Perspective**
Peter Tyedmers¹, Tim Cashion², Robert Parker³
¹School for Resource and Environmental Studies, Dalhousie University, ²University of British Columbia, ³Dalhousie University

2:45 p.m. 62 **Sustainability of Terrestrial Protein Sources**
Nathan Pelletier¹
¹

3:15 p.m. **Companion Animal Symposium II Break**

3:30 p.m. 63 **Current Knowledge in Plant Protein Sources**
Maria R. C. de Godoy¹
¹Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

4:00 p.m. 64 **Can we help support protein sustainability by considering optimizing dietary protein delivery?**
Anna-Kate Shoveller¹
¹Department of Animal Biosciences, University of Guelph

4:30 p.m. 66 **Current Trends in Protein Sourcing for Aquaculture Diets**
Jose Villalon¹
¹Nutreco

WAAP-CSAS Symposium

Chair: Christine Baes, Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern, Switzerland
2:00 PM - 5:00 PM
Meeting Room 16A

2:00 p.m. **WAAP-CSAS Symposium Introduction**

2:05 p.m. 178 **Continuing to enhance efficiency in swine**
Graham Plastow¹
¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta

2:35 p.m. 179 **Breeding for Enhancing Feed Efficiency in Dairy Cattle**
Flavio S. Schenkel¹, Luiz F. Brito², Hinayah R. Oliveira³, Tatiane Chud⁴, David Seymour⁴, Filippo Miglior⁵
¹Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, 50 Stone Rd E, N1G 1Y2, ON, Canada, ²Purdue University, ³Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, ⁴University of Guelph, ⁵Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Lactanet, Genetics Division, Guelph, Canada

3:05 p.m. 177 **Strategies to improve the efficiency of beef cattle production**
Timothy A. McAllister¹, John Basarab², Leluo Guan³
¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Alberta
Agriculture and Forestry/University of Alberta, ³University of Alberta

3:35 p.m. **WAAP-CSAS Symposium Break**

3:45 p.m. 180 **How dual-purpose chickens can help African smallholder farmers**
Naomi Duijvesteijn¹, Louis Perrault²
¹SAPPSA, ²SASSO

4:15 p.m. 181 **Enhancing the efficiency of poultry production by optimising selection objectives and breeding strategies**
Ben J. Wood¹, Hakimeh Emamgholi-Begli², Emhimad Abdalla², Ryley J. Vanderhout²,
Christine F. Baes³
¹Hybrid Turkeys, ²University of Guelph, ³Centre for Genetic Improvement of Livestock,
University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University
of Bern, Bern, Switzerland

4:45 p.m. **WAAP-CSAS Symposium Q&A**

Nonruminant Nutrition Symposium I

Chair: Xingen Lei, Cornell University College of Agricultural and Life Science; Shengfa Liao,
Mississippi State University
2:00 PM - 5:15 PM
Meeting Room 13A/B

2:00 p.m. **Nonruminant Nutrition Symposium I Introduction**

2:05 p.m. 139 **Nutrigenetics/Nutrigenomics: Nutrient-gene interactions in humans and animals**
Artemis P. Simopoulos¹
¹The Center for Genetics Nutrition and Health

2:50 p.m. 141 **A Nutrigenomics Approach Using RNA Sequencing Technology to Study Nutrient-Gene Interactions in Agricultural Animals**
Shengfa T. Liao¹, Shamimul Hasan², Jean M. Feugang¹
¹Mississippi State University, ²Department of Animal & Dairy Sciences, Mississippi State
University, USA

3:35 p.m. **Nonruminant Nutrition Symposium I Break**

3:45 p.m. 140 **ASAS-EAAP Exchange Speaker Talk: Effects of Different Sources of Fat in the Diet of Pigs on the Liver Transcriptome Estimated by 3' RNA-Sequencing**
Maria Oczkowicz¹, Małgorzata Świątkiewicz¹, Tomasz Szmatoła¹, Artur Gurgul¹, Anna
Koseniuk¹, Grzegorz Smołucha¹, Wojciech Witarowski¹
¹National Research Institute of Animal Production

4:30 p.m. 138 **ASAS-EAAP Exchange Speaker Talk: Immediate and long-term consequences of methylating micronutrient supplementation during pregnancy on the offspring's phenotype**

Nares Trakooljul ¹, Michael Oster ², Eduard Muráni ², Siriluck Ponsuksili ², Klaus Wimmers ³
¹Leibniz-Institute for Farm Animal Biology (FBN), Dummerstorf, Germany, ²Leibniz-Institute for Farm Animal Biology (FBN), ³Institute of Genome Biology, Research Institute for Farm Animal Biology (FBN)

**Animal Behavior and Well-Being Symposium I:
Precision Technology and Animal Welfare**

Chair: Trevor DeVries, University of Guelph

2:00 PM - 5:30 PM

Meeting Room 18B

2:00 p.m. **Animal Behavior and Well-Being Symposium I Introduction**

2:05 p.m. 5 **Precision Animal Welfare for Pigs**

Lindsey E. Hulbert ¹

¹Animal Sciences and Industry, Kansas State University

2:35 p.m. 6 **Knowledge hybrid vigor: improving beef cattle management with the integration of environmental and behavioral technologies**

Courtney L. Daigle ¹

¹Department of Animal Science, Texas A&M University

3:05 p.m. **Animal Behavior and Well-Being Symposium I Break**

3:15 p.m. 7 **ASAS-EAAP Exchange Speaker Talk: Increasing animal welfare and efficiency on-farm with the use of precision technology tools: technology development, application, and use**

Jasmeet Kaler ¹

¹University of Nottingham, UK

3:45 p.m. 8 **Precision dairy cattle welfare: use of technology for individual measures, record keeping and early disease detection**

Joao H.C. Costa ¹

¹University of Kentucky

4:15 p.m. 9 **Individual information and its role in dairy goat management**

Heather Neave ¹

¹AgResearch, Hamilton, New Zealand

CSAS Oral Student Competition: PHD Session

Chair: Xin Zhao, Department of Animal Science, McGill University

2:00 PM - 5:30 PM

Meeting Room 10C

2:00 p.m. 99 **Temporal and Spatial Characterization of Interleukin-6 Protein in the Caprine Testis**

Khalda Fadlalla ¹

¹Tuskegee University

2:15 p.m. 98 **Effect of engineered biocarbon on rumen fermentation, nutrient digestibility, methane emissions, and rumen microbiota in beef heifers**

Stephanie Terry ¹, Gabriel Ribeiro ², Robert Gruninger ³, Alex Chaves ⁴, Karen A. Beauchemin ⁵, Erasmus Okine ⁶, Timothy A. McAllister ⁷

¹University of Sydney, AAFC Lethbridge, ²Department of Production Animal Health, Faculty of Veterinary Medicine, University of Calgary, Calgary, AB T2N 4Z6, Canada, ³AAFC Lethbridge, ⁴University of Sydney, Sydney, Australia, ⁵Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada., ⁶University of Lethbridge, ⁷Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

2:30 p.m. 100 **Sequential feeding with diets that differ in amino acid content can significantly increase performance of growing and finishing pigs**

Alini M. Veira ¹, Luan S. Santos ², Alicia Fraga ³, Paulo Campos ⁴, Raphael Caetano ³, Luciano Hauschild ³

¹FAPESP Scholarship, São Paulo State University, Jaboticabal, Brazil, ²Federal Rural University of Rio De Janeiro, Seropédica, Brazil, ³São Paulo State University, ⁴Federal University of Viçosa

2:45 p.m. 87 **Xylanase effects on growth performance, nutrient digestibility, organ weight, and short chain fatty acid concentration in colon digesta of weaned pigs fed wheat and canola meal-based diets**

Gustavo A. Mejicanos ¹, Charles M. Nyachoti ²

¹University of Manitoba, Department of Animal Science, ²CSAS

3:00 p.m. 88 **Dietary supplementation of branched-chain amino acids higher than recommended levels in nursery pigs fed with moderately low protein diet: effects on growth performance**

Mohammad Habibi ¹, Cedrick n. Shili ¹, Julia Sutton ¹, Adel Pezeshki ¹

¹Department of Animal and Food Sciences, Oklahoma State University, Stillwater, OK 74078

3:15 p.m. **CSAS Oral Student Competition: PHD Break**

3:30 p.m. 89 **Evaluating the effect of Ca-gluconate and Ca-butyrate on SCFA absorption and permeability of the gastrointestinal tract**

Daniel H. M. Watanabe ¹, John Doelman ², Michael A. Steele ³, Leluo Guan ⁴, Greg B. Penner ⁵

¹University of Saskatchewan, ²Trouw Nutrition R&D, ³Department of Animal Biosciences, University of Guelph, ⁴University of Alberta, ⁵Department of Animal and Poultry Science, University of Saskatchewan

3:45 p.m. 96 **Development of genomics-based precision management model for Hanwoo steers; response to the divergent selection for marbling tested under different dietary energy levels.**

Chandima Jayanath Gajaweera ¹, Ki Yong Chung ², Seung Hwan Lee ¹

¹Division of Animal and Dairy Science, Chungnam National University, Republic of Korea.,

²Korea National College of Agriculture and Fisheries

4:00 p.m. 94 **Essential oils improve barrier function and attenuate inflammatory responses in porcine intestinal epithelial cells**

Qianru Hui ¹, Faith Omonijo ¹, Shangxi Liu ¹, Hua Zhang ², Ludovic Lahaye ³, Jean-Christophe Bodin ⁴, Joshua Gong ⁵, Martin Nyachoti ¹, Chengbo Yang ⁶

¹University of Manitoba, ²Guelph Research and Development Centre, Agriculture and Agri-Food Canada, ³Jefo, ⁴Jefo Nutrition Inc., ⁵Guelph Research and Development Centre, Agriculture & Agri-Food Canada, Guelph, Ontario N1G 5C9, Canada, ⁶Department of Animal Science, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

4:15 p.m. 95 **Betaine improves growth performance by increasing digestive enzymes activities, and ameliorating intestinal structure of piglets**

Sisi Li ¹, Haichao Wang ², Jie Feng ³

¹College of Animal sciences, Zhejiang University, ²Zhejiang University - College of Animal Sciences, ³College of Animal Sciences, Zhejiang University

4:30 p.m. 97 **The effects of excess iron on growth performance, intestinal and liver morphology and antioxidant capacity in weaned piglets**

Xiaonan Yu ¹, Jianan Han ², Jie Feng ³

¹Zhejiang University - College of Animal Science, ²College of Animal Science, Zhejiang University, ³College of Animal Sciences, Zhejiang University

4:45 p.m. 91 **The Production of Sulfated 16-androstene Steroids by Porcine Leydig Cells and their Potential Role in the Development of Boar Taint**

Christine Bone ¹, Heidi Laderoute ², Dyanne Brewer ³, Jocelyn Cameron ², E. James Squires ²

¹University of Guelph, ²Animal Biosciences, University of Guelph, ³Advanced Analysis Center, University of Guelph

5:00 p.m. 93 **Feeding behavior as predictive traits of fertility and lifetime productivity in replacement beef heifers**

Cameron A. Olson ¹, Lisa McKeown ², Hushton Block ³, Changxi Li ⁴, John Basarab ⁵

¹University of Alberta, ²Alberta Agriculture and Forestry, ³Agriculture and Agri-Food Canada, Lacombe, AB, Canada, T4L 1V7, ⁴University of Alberta/Agriculture and Agri-Food Canada, ⁵Alberta Agriculture and Forestry/University of Alberta

5:15 p.m. 92 **Postnatal growth retardation impairs intestinal mucosal barrier in piglets**

Ming Qi ¹, BI E TAN ², Yulong Yin ³, Simeng Liao ¹, Jianjun Li ¹, Jing Wang ¹

¹Institute of Subtropical Agriculture, Chinese Academy of Sciences, ²University of California, Davis, ³Institute of Subtropical Agriculture, Chinese Academy of Science

Small Ruminant Session

Chair: Juan Villalba, Utah State University

2:30 PM - 5:00 PM

Meeting Room 12B

2:30 p.m. 162 **Raising your kids the right way: A survey of rearing practices in Canadian dairy goat farms**

Stéphanie Bélanger-Naud¹, Dany Cinq-Mars², Carl Julien³, Sébastien Buczinski⁴, Janie Lévesque³, Julie Arsenault⁴, Elsa Vasseur¹

¹Animal Science, McGill University, ²Département des sciences animales, Université Laval,

³CRSAD, ⁴Faculté de médecine vétérinaire de l'Université de Montréal

2:45 p.m. 164 **The effect of grass silage compared to whole crop wheat silage on colostrum yield, lamb birth weight and ewe performance during late gestation**

Jonathan T. Higgins¹, Mary B. Lynch¹, Joe Jones¹, Stephen Lott¹, Cornelia Grace¹, Fiona McGovern², Mary McEvoy³, Dermot Campion³, Bernie Flynn¹, Tommy Boland⁴

¹University College Dublin, ²Teagasc, ³Germinal Ireland Limited, ⁴UCD

3:00 p.m. 161 **Preference for inorganic sources of calcium and phosphorus in sheep**

Juan J. Villalba¹, Mariana Pedernera², Alessandro Mereu³

¹Utah State University, ²Facultad de Ciencias Agropecuarias, Universidad Autónoma del Estado de Morelos, ³Yara Iberian

3:15 p.m. 159 **The effect of multispecies swards on parasite faecal egg counts of grazing lambs**

Romina A. Rodriguez¹, Cornelia Grace², Mary B. Lynch², Helen Sheridan³, Stephen Lott², Tommy Boland³

¹Universidad Austral de Chile, ²University College Dublin, ³UCD

3:30 p.m. **Small Ruminant Session Break**

3:45 p.m. 163 **Annual differences in fecal egg counts in a forage-based ram test**

Morgan Van Davelaar¹, David R. Notter¹, D. Lee Wright¹, Anna M. Zajac¹, Scott P. Greiner¹, Heather L. Bradford¹

¹Virginia Tech

4:00 p.m. 166 **The effect of late lactation and pre-breeding nutrition on reproductive outcomes in an accelerated lambing system**

Richard A. Ehrhardt¹, Jordan Moody¹, Makela Barbara¹, Veiga-Lopez Almudena¹

¹Michigan State University

4:15 p.m. 165 **Effect of late lactation nutrition on milk production and composition in prolific sheep on an accelerated lambing system.**

Richard A. Ehrhardt¹, Jordan Moody¹, Makela Barbara¹, Veiga-Lopez Almudena¹

¹Michigan State University

4:30 p.m. 160 **A comparison of body temperature among pregnant, non-pregnant and lactating hair sheep ewes in the tropics**

Robert Godfrey¹, Amran Nero², Sue A. Lakos¹

¹University of the Virgin Islands, Agricultural Experiment Station, ²University of the Virgin Islands

4:45 p.m. 167 **Evaluation of an Out-of-Season Breeding System for Organic Lamb Production in Missouri**

Tumen Wuliji¹, Amy Bax¹, Liga Wuri², Luke Wilbers¹, Christopher Boeckmann³

¹Lincoln University, ²University of Missouri, ³Lincoln University of Missouri

International Agriculture Session

Chair: Beth Kegley, University of Arkansas Division of Agriculture

4:00 PM - 4:45 PM

Meeting Room 14

4:00 p.m. **Presentation of Award: Bouffault International Animal Agriculture Award**

Kristi Smedley¹

¹Center for Regulatory Services

4:05 p.m. 111 **Awardee Talk - Sustainable diets must include animal-source foods**

Adegbola T. Adesogan¹, Sarah Mckune², Geoffrey E. Dahl¹, Arie Havelaar³, Marjatta E. Eilitta⁴

¹Department of Animal Sciences and Innovation Lab for Livestock Systems, University of Florida, ²University of Florida, ³Department of Animal Science and Innovation Lab for Livestock Systems, University of Florida, ⁴Department of Agronomy and Innovation Lab for Livestock Systems, University of Florida

4:30 p.m. 113 **Somatic cells as an indicator of quality of the cow's milk**

Kirill Plemyashov¹, Nikolai Bogachev², Valerii G. Skopichev³, Anastasia A. Ignateva⁴, Fliura Alistratova², Olga Dushenina¹, Svetlana V. Vasileva¹, Nina Pilaeva⁵, Polina A. Polistovskaia⁶

¹Saint Petersburg State University of Veterinary Medicine, ²Saint Petersburg State Academy of Veterinary Medicine, ³St. Petersburg state Academy of veterinary medicine, ⁴Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State University of Veterinary Medicine", ⁵St. Petersburg State Academy of Veterinary Medicine, ⁶Saint-Petersburg State University of Veterinary Medicine

Poster Session III
5:00 PM - 6:00 PM
Ballroom D

5:00 p.m. PSIII-33 **A new approach to resynchronize beef cows and perform two Timed Artificial Inseminations 24 day apart**

Marcos A. Colli¹, Garrett Cline², Josh Walker³, David Forrest⁴, Pietro S. Baruselli⁵, Charles Looney⁶

¹University of Sao Paulo, Sao Paulo, SP - School of Veterinary Medicine and Animal Science, ²Ovagenix, ³RedBud Farms, ⁴Texas A&M University, ⁵Faculty of Veterinary Medicine and Animal Science, University of São Paulo, Brazil, ⁶Southwest Research and Extension Center

5:00 p.m. PSIII-8 **A risk factor analysis of health traits in turkeys (Meleagris gallopavo) on Canadian farms**

Emily M. Leishman¹, Nienke Van Staaveren¹, Vern R. Osborne², Ben J. Wood³, Christine F. Baes⁴, Alexandra Harlander¹

¹University of Guelph, ²Department of Animal Biosciences, University of Guelph, ON, N1G 2W1., ³Hybrid Turkeys, ⁴Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern, Switzerland

5:00 p.m. PSIII-25 **Adipose gene expression of mature neutered male cats during the transition from a lean to an obese phenotype**

Maria R. C. de Godoy¹, Heather Mangian², Akihiro Mori², Heidi Phillips³, Kelly S. Swanson⁴

¹Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, ²Department of Animal Sciences, University of Illinois at Urbana-Champaign, ³Veterinary Clinical Medicine, University of Illinois at Urbana-Champaign, ⁴University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-7 **Analysis of sow postures using infrared sensors**

Kwongoo Bum¹, Sang-Hyon OH², Donghoon Lee³

¹Chungbuk National University, ²University of Maryland Eastern Shore, ³Chungbuk national university

5:00 p.m. PSIII-6 **Analysis of vocal sounds for detecting abnormal symptoms in sows**

Donghoon Lee¹, Kwongoo Bum², Sang-Hyon OH³

¹Chungbuk national university, ²Chungbuk National University, ³University of Maryland Eastern Shore

5:00 p.m. PSIII-10 **Body temperature changes in piglets anesthetized for castration during the recovery phase**

Simone M. Schmid¹, Jason J. Hayer¹, Celine Heinemann¹, Julia Steinhoff-Wagner¹

¹Institute of Animal Science, University of Bonn, Germany

5:00 p.m. PSIII-1 **Characterization of eating pattern and animal behavior according to productive system of intensive beef fattening fed high-concentrate diets**

Marçal Verdu ¹, Jordi Cucurull ², Sonia Martí ³, Maria Devant ³

¹Alimentació Animal i Producció, bonÀrea Agrupa, ²Grup BonArea, ³IRTA, Ruminant Production

5:00 p.m. PSIII-22 **Chemical Composition and In Vitro Fermentation Characteristics of Ancient Grains using Canine Fecal Inoculum**

Zac Traugher ¹, Fei He ², Jolene Hoke ³, Gary M. Davenport ³, Maria R. C. de Godoy ⁴

¹University of Illinois - Urbana-Champaign, ²University of Illinois at Urbana Champaign, ³Archer Daniels Midland Company, ⁴Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-42 **Diet selection and trade-offs between condensed tannins and nutrients in parasitized sheep**

Morgane Costes-Thiré ¹, Pauline Laurent ², Cécile Ginane ¹, Juan J. Villalba ³

¹INRA, VetAgro Sup, UMR Herbivores, ²UFR Nutrition animale, Qualité des produits et bien-être, Département des Sciences Animales, Institut National Agronomique, Paris-Grignon, ³Utah State University

5:00 p.m. PSIII-40 **Dietary effects on food intake, body weight, body composition and metabolism of adult female cats after spay surgery**

Eiji Iwazaki ¹, Anne H. Lee ², Thunyaporn Phungviwatnikul ², Helen Valentine ³, Kelly S. Swanson ²

¹Nippon Pet Food Company, Tokyo, Japan, ²University of Illinois at Urbana-Champaign, ³Department of Veterinary Clinical Medicine, University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-27 **Dietary intakes of protein and starch affect the oxidation of nutrients in tissues of Largemouth bass**

Xinyu Li ¹, Guoyao Wu ²

¹Texas A&M University, ²Department of Animal Science, Texas A&M University

5:00 p.m. PSIII-15 **Effect of a neuro-sensory additive on behaviour and growth of feedlot finishing beef cattle**

Andre Daurea ¹, Guillaume Desrousseaux ², Natalia Vilas Boas Fonseca ³, Lauriston Bertelli ¹, Rodrigo Tozetto ⁴

¹Premix Company, ²Laboratoires Phodé, ³Universidade Estadual Paulista - Unesp, ⁴Phodé

5:00 p.m. PSIII-11 **Effect of dietary Lactic Acid Bacteria level on reproductive performance and plasma indices in lactating sows**

can yang ¹, xiaowu tang ², fengna li ³, Ruilin huang ³, Yulong Yin ³, jian liu ⁴, wenxuan su ³

¹Hunan Normal University; Institute of Subtropical Agriculture, Chinese Academy of Science; Hengyang Normal University, ²DaBeinong Animal Nutrition (Changsha) Co., Ltd, Changsha, Hunan, 410200, China, ³Institute of Subtropical Agriculture, Chinese Academy of Science, ⁴Xiangcun High-technology Agricultural Co. LTD

5:00 p.m. PSIII-9 **Effect of maternal immune activation during gestation on piglets' cortisol response to stress**

Courtnei R. Bolt¹, Haley E. Rymut², Alexandra K. Houser³, Laurie A. Rund¹, Rodney W. Johnson¹, Sandra L. Rodrigues-Zas⁴

¹University of Illinois, ²University of Illinois at Urbana-Champaign, ³University of Illinois Department of Animal Sciences, ⁴University of Illinois at Urbana Champaign

5:00 p.m. PSIII-12 **Effect of PRRSV infection during gestation on sickness behaviors in the piglets after immune challenge**

Haley E. Rymut¹, Alexandra K. Houser², Courtnei R. Bolt³, Laurie A. Rund³, Rodney W. Johnson³, Sandra L. Rodrigues-Zas⁴

¹University of Illinois at Urbana-Champaign, ²University of Illinois Department of Animal Sciences, ³University of Illinois, ⁴University of Illinois at Urbana Champaign

5:00 p.m. PSIII-31 **Effects of associative use of additives on performance, carcass characteristics and serum D-lactate in Nelore x Angus young bulls**

Marcio M. Ladeira¹, Jose Maria Oliveira Junior¹, Daniel R. Casagrande², Priscilla Teixeira¹, Bruno Homem¹, David Soares¹

¹Universidade Federal de Lavras, ²University of Lavras, Brazil

5:00 p.m. PSIII-35 **Effects of dietary macronutrient profile on apparent total tract macronutrient digestibility and fecal metabolites of female dogs after spay surgery**

Thunyaporn Phungviwatnikul¹, Helen Valentine², Fei He³, Kelly S. Swanson¹

¹University of Illinois at Urbana-Champaign, ²Department of Veterinary Clinical Medicine, University of Illinois at Urbana-Champaign, ³University of Illinois at Urbana Champaign

5:00 p.m. PSIII-19 **Effects of extrusion on true metabolizable energy, standardized amino acid digestibility, and chick growth assay of red and white sorghum**

Patrick von Schaumburg¹

¹University of Illinois Urbana-Champaign

5:00 p.m. PSIII-29 **Effects of late gestational tall fescue forage system on spring-calving beef cow performance, circulating metabolites, and colostrum quality**

Emma L. Stephenson¹, Meera C. Heller², Ann L. Kenny¹, Allison M. Meyer³

¹Division of Animal Sciences, University of Missouri, ²University of California, ³University of Missouri

5:00 p.m. PSIII-37 **Effects of supplemented trace mineral amino acid chelates in working Labrador Retrievers**

Craig N. Coon¹, Jason W. Fowler¹, Jessica L. Varney¹, Max A. Sitver², Mary Ann Boggess¹

¹Four Rivers Kennel, LLC, ²Four Rivers Kennel

5:00 p.m. PSIII-2 **Effects of temperament on adaptation to prolonged water restriction**

Kelsey Bruno ¹, Cashley Ahlberg ², Heather Meador ¹, Michelle S. Calvo-Lorenzo ³, Udaya DeSilva ¹, Clint Krehbiel ⁴, Raluca G. Mateescu ⁵, Sara E. Place ⁶, Megan M. Rolf ², Deb VanOverbeke ¹, Blake K. Wilson ¹, Chris Richards ¹

¹Oklahoma State University, ²Kansas State University, ³Elanco Animal Health, ⁴University of Nebraska-Lincoln, ⁵University of Florida, ⁶National Cattlemen's Beef Association

5:00 p.m. PSIII-16 **Evaluating the impact of group stunning on physiological parameters of pigs in a small abattoir**

Morgan A. Schaeperkoetter ¹, Temple Grandin ¹, Lily N. Edwards-Callaway ²

¹Colorado State University, ²Department of Animal Sciences, Colorado State University

5:00 p.m. PSIII-41 **Fecal characteristics and metabolite concentrations of cats fed a high-protein, high-fiber diet after spay surgery**

Anne H. Lee ¹, Eiji Iwazaki ², Fei He ³, Kelly S. Swanson ¹

¹University of Illinois at Urbana-Champaign, ²Nippon Pet Food Company, Tokyo, Japan,

³University of Illinois at Urbana Champaign

5:00 p.m. PSIII-30 **Feedlot performance and carcass characteristics of Angus and Wagyu sired cattle raised to a similar body weight endpoint**

Jerad Jaborek ¹, Alejandro E. Relling ¹

¹The Ohio State University

5:00 p.m. PSIII-39 **Gene expression in adipose tissue at 8 months could explain adult overweight status in Beagle dogs.**

Véronique Leray ¹, Alex Moinard ¹, Lucie Leclerc ², Chantal Thorin ¹, Patrick Nguyen ¹, John Flanagan ²

¹NP3, Nutrition, PhysioPathology and Pharmacology Unit, 2017.B146, ²Royal Canin

5:00 p.m. PSIII-36 **Increased viscosity enhances water intake and reduces risk of calcium oxalate stone formation in cats**

Melissa Vanchina ¹, Blair Ogleby ¹, Dennis E. Jewell ²

¹Hill's Pet Nutrition, Inc., ²Hill's Pet Nutrition Inc

5:00 p.m. PSIII-4 **Infrared thermography as a method for detecting pain in dairy calves in response to disbudding on-farm**

Mhairi Sutherland ¹, Gemma Lowe ¹, Neil Cox ², Mairi Stewart ³

¹AgResearch Ltd., ²neilStat, ³GRNZ

5:00 p.m. PSIII-14 **Infrared thermography as a tool to detect inflammation in feedlot lambs with footrot**

Karen S. Schwartzkopf-Genswein ¹, Wiolene Montanari Nordi ², Desiree Gellatly ³, Daniela M. Meléndez Suárez ², Timothy D. Schwinghamer ², Sonia Marti ⁴, Kelly Anklam ⁵, Joyce Van Donkersgoed ⁶, Kathy Parker ⁷, Dorte Dopfer ⁸

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada,

²Agriculture and Agri-Food Canada, ³University of Calgary, ⁴IRTA, Ruminant Production,

⁵University of Wisconsin, ⁶Alberta Beef Health Solutions, ⁷Valley Veterinary Services,

⁸University of Wisconsin-Madison

5:00 p.m. PSIII-28 **Kibbles ‘n Conjecture: A corollary analysis of ingredient composition, price, and nutritive value of commercial dog food**

Ranee A. Miller ¹, William B. Smith ²

¹Department of Animal Science and Veterinary Technology, Tarleton State University,

²Tarleton State University

5:00 p.m. PSIII-34 **Maternal disposition as related to calf weaning performance using chute scores**

Michael Sims ¹, PAUL A. BECK ², Cyril B. Stewart ³, Reagan N. Cauble ⁴

¹Oklahoma State University, ²Oklahoma State University, Department of Animal & Food Sciences, ³University of Arkansas SWREC, ⁴University of Arkansas

5:00 p.m. PSIII-5 **Metabolic hormones, live weight, grazing behaviour and offspring distance of primiparous beef cows grazing grasslands at two herbage allowances**

Martin Claramunt ¹, Ana Meikle ², Pablo Soca ³

¹Centro Universitario de la Región Este – CURE, Universidad de la República, Uruguay,

²Facultad de Veterinaria, Universidad de la República, ³Facultad de Agronomía, Universidad de la República

5:00 p.m. PSIII-23 **Nutrient and Maillard Reaction Product Concentrations of Commercially Available Pet Foods and Treats**

Patricia Massae Oba ¹, Nagait Hwisa ², Xinhe Huang ², Keith Cadwallader ², Kelly S. Swanson ²

¹University of Illinois Urbana-Champaign, ²University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-38 **Pepsin-pancreatin protein digestibility of various protein sources intended for pet food**

Megan E. Morts ¹, Ingrid Silva ¹

¹Kansas State University

5:00 p.m. PSIII-13 **Preliminary assessment of the impact of liver abscess presence on stress-related physiological parameters associated with well-being in feedlot cattle**

Faith Baier ¹, Temple Grandin ¹, Terry E. Engle ¹, Lily N. Edwards-Callaway ²

¹Colorado State University, ²Department of Animal Sciences, Colorado State University

5:00 p.m. PSIII-18 **Protein efficiency ratios of various dried chicken, egg, and pea proteins used in diets for dogs and cats.**

Amanda N. Dainton ¹, Josephine M. Zurschmiede ², R. Scott Beyer ²

¹Department of Grain Science and Industry, Kansas State University, ²Department of Animal Sciences and Industry, Kansas State University

5:00 p.m. PSIII-21 **Relationship between companion animal interaction and emotional safety within college students**

Molly Nicodemus ¹, Katie Holtcamp ², Muhammet Ugur ²

¹Animal & Dairy Sciences, Mississippi State University, ²Mississippi State University

5:00 p.m. PSIII-17 **The effects of a yeast product on apparent total tract macronutrient digestibility, fecal characteristics, fecal fermentative end products, fecal microbiota, and immune responses of adult dogs**

Ching-Yen Lin ¹, Andrew J. Steelman ², Maria R. C. de Godoy ³, Kelly S. Swanson ⁴

¹Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, ²University of Illinois Departments of Animal Sciences and Nutritional Sciences, ³Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign,

⁴University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-3 **The effects of feeding milk from a nipple or a bucket on performance, blood metabolism, rumen fermentation and behavior of dairy calves during preweaning period**

Shuai Liu ¹, Saiergelin Bayindaerji ¹, Jingjun Wang ¹, Shengli Li ²

¹State Key Laboratory of Animal Nutrition, College of Animal Science and Technology, China Agricultural University, ²China Agricultural University

5:00 p.m. PSIII-32 **The influence of liver copper concentration on copper homeostatic liver proteins in beef cattle.**

Nicole M. Tillquist ¹, Meghan P. Thorndyke ¹, Terry E. Engle ¹

¹Colorado State University

5:00 p.m. PSIII-26 **True Nutrient and Amino Acid Digestibility of Black Soldier Fly Larvae Fed Different Forms and Concentrations of Calcium Using the Precision-Fed Cecectomized Rooster Assay**

Sungho Do ¹, Liz Koutsos ², Kelly S. Swanson ³

¹University of illinois urbana-champagin, ²EnviroFlight, ³University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-24 **True Nutrient and Amino Acid Digestibility of Commercial Pork-Based Extruded Dog Foods Using the Precision-Fed Cecectomized Rooster Assay**

Patricia Massae Oba ¹, Kelly S. Swanson ²

¹University of Illinois Urbana-Champaign, ²University of Illinois at Urbana-Champaign

5:00 p.m. PSIII-20 **Use of legumes and yeast as main protein sources in extruded canine diets**

Lauren M. Reilly ¹, Fei He ², Heather Mangian ³, Jolene Hoke ⁴, Gary M. Davenport ⁴

¹University of Illinois - Urbana/Champaign, ²University of Illinois at Urbana Champaign,

³Department of Animal Sciences, University of Illinois at Urbana-Champaign, ⁴Archer Daniels Midland Company

Wednesday, July 10, 2019

Poster Upload Hours

Chair:

6:45 AM - 8:30 PM

Ballroom D

Exhibit Hall Hours - Wednesday

Chair:

8:00 AM - 8:30 PM

Ballroom D

Poster Session IV

7:15 AM - 9:15 AM

Ballroom D

7:15 a.m. PSIV-6 **A real-time monitoring system for composting of livestock manure**

Gee-Tae Park ¹, HyoKon Kang ¹, YoungJun Na ¹, SANGRAK LEE ¹

¹Konkuk University

7:15 a.m. PSIV-14 **Calcium digestibility in hatchery byproducts fed to nursery pigs**

Jung Y. Sung ¹, Beob G. Kim ¹

¹Konkuk University

7:15 a.m. PSIV-18 **Effect of Two Dietary Crude Protein Levels on Finishing Performance, Meat Quality, and Genomic Changes of Lambs**

Sarah Shelby ¹, Keshari Thakali ², Yongjie Wang ¹, Jason Apple ³, Yan Huang ¹

¹University of Arkansas, ²University of Arkansas Medical School, ³University of Arkansas Division of Agriculture

7:15 a.m. PSIV-4 **Effect of winter nutrition (pasture vs. feedlot) of beef calves on further spring grazing performance and feed conversion efficiency for the winter-spring period**

Natalia Zabalveytia ¹, Alvaro Simeone ², María Victoria Burjel ², Virginia Beretta ²

¹University of Republic, ²University of the Republic

7:15 a.m. PSIV-3 **Effect of winter-feeding system and roughage level in feedlot ration on subsequent spring grazing behavior and dry matter intake of beef growing heifers.**

María Victoria Burjel ¹, Alvaro Simeone ¹, Oscar Bentancur ¹, Natalia Zabalveytia ², Virginia Beretta ¹

¹University of the Republic, ²University of Republic

7:15 a.m. PSIV-12 **Effects of an additional iron injection administered to piglets before weaning**

Tyler B. Chevalier ¹, Merlin D. Lindemann ¹

¹University of Kentucky

7:15 a.m. PSIV-15 **Effects of Bacillus subtilis PB6 and/or chromium propionate supplementation on health, performance, and blood parameters of high-risk cattle during the feedlot receiving period**

Taylor M. Smock¹, Kendall L. Samuelson¹, Hannah A. Seiver¹, Jerilyn Hergenreder², Whitney Rounds³

¹West Texas A&M University, ²Kemin Industries Inc., ³Kemin AgriFoods

7:15 a.m. PSIV-5 **Effects of Feeding Fruit-Vegetable Byproducts on Performance of Growing Hanwoo Steers**

Junsik Woo¹, Geun Hong Song², Juri Kim¹, Gyeonglim Ryu³, Youngkyun Oh⁴, Wansup Kawk⁵, Keun Kyu Park³

¹Department of Animal Science and Technology, Konkuk University, Korea, ²Konkuk University, ³Konkuk University, ⁴National Institute of Animal Science, Rural Development Administration, Korea, ⁵College of Medical Life Sciences, Konkuk University, Korea

7:15 a.m. PSIV-1 **Effects of nutrient restriction and realimentation of gestating ewes on fetal carbohydrase activities in the small intestine**

Ronald J. Trotta¹, Kimberly A. Vonnahme², Kendall C. Swanson³

¹University of Kentucky, ²Zoetis, ³North Dakota State University

7:15 a.m. PSIV-9 **Effects of plant extracts on adult Haemonchus contortus mortality**

Trixie L. Wetmore¹, Taylor Luce¹, Ken Mix¹, Elizabeth Benavides¹

¹Texas State University

7:15 a.m. PSIV-8 **Effects of Restricted Maternal Nutrition and Re-alimentation on Fetal Muscle Development from Mid to Late Gestation in Sheep**

Amanda E. Liefeld¹, Michaela Mitchell¹, Kristen E. Govoni², Kimberly A. Vonnahme³, Anna T. Grazul-Bilska⁴, Kendall C. Swanson⁴, Steven A. Zinn², Sarah A. Reed²

¹University of Connecticut, ²Dept. of Animal Science, University of Connecticut, ³Zoetis, ⁴North Dakota State University

7:15 a.m. PSIV-16 **Impact of environmental enrichment on feedlot steer productivity and aggression**

Rachel M. Park¹, Jenny S. Jennings², Courtney L. Daigle³

¹Texas A&M University, ²Texas A&M AgriLife Research, ³Department of Animal Science, Texas A&M University

7:15 a.m. PSIV-2 **Investigating candidate scur genes in Bos taurus breeds**

Crystal Ketel¹, Mika Asai-Coakwell²

¹University of Saskatchewan, ²Department of Animal and Poultry Science, University of Saskatchewan

7:15 a.m. PSIV-21 **Landscape-Use Pattern and Performance of Small Ruminants in Woodlands with Altering Understory Vegetation Heights**

Shailes Bhattra¹, Uma Karki¹, Bidur Paneru¹, Nevershi Ellis¹, Sanjok Poudel²

¹Tuskegee University, ²Virginia Polytechnic Institute and State University

7:15 a.m. PSIV-19 **Live and carcass production traits for progeny of an F1 USDA Prime – yield grade 1 carcass clone sire in comparison with progeny of popular reference sires**

Forest L. Francis ¹, Dean Hawkins ², Gregg Veneklasen ³, David G. Lust ², Ty E. Lawrence ²
¹Beef Carcass Research Center, ²West Texas A&M University, ³Timber Creek Veterinary Clinic

7:15 a.m. PSIV-10 **Preference evaluation of plant functional types grasses in calves**
María A. Vulliez ¹, María Bruni ¹, Ana I. Trujillo ¹, Martín Durante ², Lucrecia Lezana ², Pablo Soca ³

¹Departamento de Producción Animal y Pasturas, Facultad de Agronomía, Universidad de la República, ²Estación Experimental Agropecuaria Concepción del Uruguay, INTA, ³Facultad de Agronomía, Universidad de la República

7:15 a.m. PSIV-7 **Selections of Lactobacillus and Fermentation Conditions for Fermenting Food Ingredients to Improve Digestibility of Senior Dogs**

SOJEONG PARK ¹, JIHYEON LEE ¹, EUNCHAE LEE ¹, SANGRAK LEE ²
¹Konkuk university, ²Konkuk University

7:15 a.m. PSIV-13 **Supplemental phytase increases phosphorus digestibility in pigs regardless of phytase source or feed pelleting**

Bokyung Hong ¹, Beob G. Kim ¹
¹Konkuk University

7:15 a.m. PSIV-20 **TAS2R Genes in Sheep and Cattle Compared to Humans**

Dillan Henslee ¹, Melinda J. Ellison ¹, Brenda M. Murdoch ¹, J. Bret Taylor ², Joel V. Yelich ¹
¹University of Idaho, ²USDA

7:15 a.m. PSIV-11 **The effect of a high sugar supplement versus a beef supplement during pregnancy on offspring hepatic gene expression in a swine biomedical model**

Jerica R. Hall ¹, Ashley Hoyle ¹, Mara R. Hirschert ¹, Kendall C. Swanson ¹, Kimberly A. Vonnahme ², Alison K. Ward ¹
¹North Dakota State University, ²Zoetis

7:15 a.m. PSIV-22 **The effects of altering ruminal fermentable carbohydrate supply in finishing diets containing distillers grains on rumen fermentation characteristics and nitrogen utilization**

Cody Ream ¹, Allison V. Stevens ¹, Gwinyai E. Chibisa ¹
¹University of Idaho

Poster Session V

8:15 AM - 9:15 AM

Ballroom D

8:15 a.m. PSV-30 **A nutritional survey of commercially available grass-finished beef**

Jason E. Rowntree ¹, Sara Bronkema ¹, Raghav Jain ¹, Jeannine P. Schwehofer ², Chad Bitler ³, Jenifer I. Fenton ⁴

¹Michigan State University, ²Michigan State University Extension, ³Greenacres Foundation, ⁴MSU

8:15 a.m. PSV-41 **Antibacterial activity of ferulic acid and sodium chlorate against Escherichia coli F18 and K88 during incubations with porcine fecal bacteria**

CLAUDIO ARZOLA-ALVAREZ ¹, Elizabeth Latham ², Robin Anderson ³, Jaime Salinas-Chavira ⁴, Yamicela Castillo ⁵, Marina Ontiveros ⁶, MONSERRATH FELIX-PORTILLO ⁷, Ana Luisa Olivas-Palacios ⁸, Ruth Lisbeth Armendariz-Rivas ⁹, Alejandro Arzola-Rubio ¹⁰

¹UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ²Bezoar Laboratories ACC, ³ARS/USDA, ⁴Universidad Autonoma de Tamaulipas, ⁵Universidad Autonoma de Chihuahua, ⁶Autonomous University of Ciudad Juarez. Nuevo Casas Grandes, Chihuahua, Chih., Mexico, ⁷Universidad Autónoma de Chihuahua, ⁸UACH, ⁹U A Ch, ¹⁰Uach

8:15 a.m. PSV-40 **Antibacterial activity of sodium chlorate and essential oils against Escherichia coli (F18 and K88) during incubations with porcine fecal bacteria**

Jaime Salinas-Chavira ¹, Robin Anderson ², Elizabeth Latham ³, Rafael Cabrera ⁴, Yamicela Castillo ⁵, Ana Luisa Olivas-Palacios ⁶, MONSERRATH FELIX-PORTILLO ⁷, Ruth Lisbeth Armendariz-Rivas ⁸, Alejandro Arzola-Rubio ⁹, CLAUDIO ARZOLA-ALVAREZ ¹⁰

¹Universidad Autonoma de Tamaulipas, ²ARS/USDA, ³Bezoar Laboratories ACC, ⁴EW Nutrition, USA, ⁵Universidad Autonoma de Chihuahua, ⁶UACH, ⁷Universidad Autónoma de Chihuahua, ⁸U A Ch, ⁹Uach, ¹⁰UNIVERSIDAD AUTONOMA DE CHIHUAHUA

8:15 a.m. PSV-35 **Broiler chicken meat quality**

Kirill Plemyashov ¹, Alexander Aristov ², Sergey Semenov ², Natal'ya Kudinova ², Polina Anipchenko ³, Georgiy Nikitin ⁴, Anatoly Stekolnikov ⁵, Mariya Ladanova ⁵

¹Saint Petersburg State University of Veterinary Medicine, ²Voronezh State Agrarian University after Emperor Peter I, ³St. Petersburg State University of Veterinary Medicine, ⁴Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine", ⁵Saint- Petersburg State Academy of Veterinary Medicine

8:15 a.m. PSV-34 **Carcass characteristics of Criollo and Criollo crossbred steers raised on Chihuahuan Desert rangeland**

Matthew McIntosh ¹, Andres Cibils ², Rick Estell ³, Alfredo Gonzalez ³, Sheri Spiegel ³, Amanda Blair ⁴, Shelemia Nyamurekung'e ², Sergio A. Soto-Navarro ⁵, Cindy Tolle ⁶

¹New Mexico State University Department of Animal and Range Science, ²Department of Animal Science, New Mexico State University, ³USDA-ARS Jornada Experimental Range, ⁴South Dakota State University, ⁵New Mexico State University, ⁶Evergreen Ranching

8:15 a.m. PSV-29 **Changes in the PSE and DFD porcine muscle proteome during autolysis**

Natalia L. Vostrikova ¹, Irina M. Chernukha ², Leonid I. Kovalyov ³, Oleg V. Schkabrov ⁴

¹V. M. Gorbatov Federal Research Center for Food Systems of RAS, ²V. M. Gorbatov Federal Research Centre for Food Systems of RAS, ³Federal State Institution «Federal Research Centre «Fundamentals of Biotechnology» of the Russian Academy of Sciences», ⁴Mogilev Food University, Republic of Belarus

8:15 a.m. PSV-28 **Effect of a neuro-sensory additive on meat quality of feedlot finishing beef cattle**

Guillaume Desrousseau ¹, Andre Daurea ², Lauriston Bertelli ², Rodrigo Tozetto ³

¹Laboratoires Phodé, ²Premix Company, ³Phodé

8:15 a.m. PSV-24 **Effect of pre-weaning, post-weaning and fattening growth rate on carcass and meat traits in feedlot Nellore cattle**

Tamyres Amorim¹, Jessica Gemelli², Ingrid Fuzikawa², Taiane S. Martins³, Gabriella Moura², Lenise Mueller², Adrielle D. Ferrinho⁴, Pollyana Garbossa⁵, Julian A. Muñoz², Caroline Rosa², Vinicius Ramos², Raquel Modesto², Mariana Costa², Michel Ronchi², Pedro V. Dibo², Talles D. Zambianco², Mirele Poleti², Fernando baldi⁶, Ives Claudio C. Da Silva Bueno⁷, Rosana Corte³, Angelica Pereira⁸

¹Faculdade de Zootecnia e Engenharia de Alimentos (FZEA), Universidade de São Paulo (USP), ²Faculdade de Zootecnia e Engenharia de Alimentos (FZEA), Universidade de São Paulo (USP), ³Faculdade de Medicina Veterinária e Zootecnia (FMVZ), ⁴Faculdade de Zootecnia e Engenharia de Alimentos (FZEA) - Universidade de São Paulo (USP), ⁵University of Sao Paulo, ⁶São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, SP, Brazil. National Council for Scientific and Technological Development (CNPq), Brazil, ⁷Department of Animal Science, College of Animal Science and Food Engineering, Pirassununga, SP, Brazil., ⁸Universidade de Sao Paulo

8:15 a.m. PSV-27 **Fat color and myoglobin of meat from young cattle fed with mineral or concentrate in growing phase and finished on pasture or feedlot**

Juliana A. Torrecilhas¹, Elias San Vito², Josiane F Lages³, Giovanni Fiorentini⁴, Tiago Simioni⁵, Pablo Castagnino⁶, Laís Lima⁵, Telma Berchielli⁷

¹São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, ²Federal University of Mato Grosso, ³ASAS, ⁴Federal University of Pelotas, ⁵São Paulo State University, ⁶Botucatu State University, ⁷Sao Paulo State University

8:15 a.m. PSV-38 **Fatty acids profile of subcutaneous fat deposition in Nellore bulls classified by feed efficiency**

Camila Delveaux Araujo Batalha¹, Ana Carolina Almeida Rollo de Paz¹, Renata Helena Branco¹, Roberta Carrilho Canesin¹, Joslaine Noely dos Santos Gonçalves Cyrillo¹, Maria Eugenia Z. Mercadante², Sarah Figueiredo Martins Bonilha¹

¹Instituto de Zootecnia, Centro APTA Bovinos de Corte, ²Institute of Animal Science

8:15 a.m. PSV-39 **Fatty acids profile of the meat from Nellore young bulls supplemented with lauric acid¹**

Sergiane A Araújo¹, Ronaldo L. Oliveira², Analívia M. Barbosa³, Aline R. Silva¹, Rebeca D. X. Ribeiro¹, Neiri J. A. Santos¹, Thadeu M. Silva³, Jarbas M. Silva Júnior¹, Anny G. V. O Lima¹, Thiago V. C. Nascimento¹

¹Student, ²Federal University of Bahia, ³Professor

8:15 a.m. PSV-32 **Influence of chlorate and chlorate plus molybdate on the growth of multi-drug resistant staphylococci**

Oscar Ruiz¹, YAMICELA CASTILLO-CASTILLO², Robin Anderson³, Michael E. Hume⁴, CLAUDIO ARZOLA-ALVAREZ², MONSERRATH FELIX², ANA LUISA OLIVAS², RUTH ARMENDARIZ², IEONARDO CARLOS², Jaime Salinas-Chavira⁵

¹Univ Aut de Chihuahua, ²UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ³ARS/USDA, ⁴USDA,ARS, College Station,Texas,USA, ⁵Universidad Autonoma de Tamaulipas

8:15 a.m. PSV-42 **Investigations of polycyclic aromatic hydrocarbons and strategies of their decrease in smoked meat products**

Andrey V. Kulikovskii ¹, Ivan Gorlov ², Marina Slozhenkina ², Oksana Kuznetsova ³, Dmitry A. Utyanov ¹

¹V.M. Gorbатов Federal Research Center for Food Systems of Russian Academy of Sciences, ²Volga Research Institute of Production and Processing of Meat and Dairy Products, ³The V.M. Gorbатов All-Russian Meat Research Institute

8:15 a.m. PSV-33 **Marbling and expression of genes involved in lipid metabolism in the muscle of Nellore and Nellore × Angus steers fed whole shelled corn diets**

Marcio M. Ladeira ¹, Priscilla Teixeira ¹, Aline Rodrigues ¹, Tamara Coelho ¹, Ana Carolina Santos ¹, Jose Maria Oliveira Junior ¹, Daniel R. Casagrande ²

¹Universidade Federal de Lavras, ²University of Lavras, Brazil

8:15 a.m. PSV-31 **Mechanisms and biochemical pathways affecting the eating quality of Triceps brachii muscle**

Esther O. Ijiwade ¹, Heather L. Bruce ², Le Luo L. Guan ³, Yanhong Chen ³, Bimol Roy ², Rabaa Hamed ⁴

¹Department of Animal, Food and Nutritional science, University of Alberta, ²Department of Agricultural, Food and Nutritional Science, University of Alberta, ³Department of Agriculture, Food and Nutritional Science, University of Alberta, Edmonton, AB T6G 2P5, Canada, ⁴Department of animal science, food and nutritional science

8:15 a.m. PSV-25 **Mitochondrial function of skeletal muscle early postmortem is influenced by cattle breed and temperature**

Patricia Ramos ¹, Chengcheng Li ¹, Mauricio A. Aguirre Elzo ¹, Stephanie Wohlgemuth ¹, Tracy L. Scheffler ²

¹University of Florida, ²Department of Animal Sciences, University of Florida

8:15 a.m. PSV-23 **Prediction of retail yield for purebred and crossbred Jersey cattle raised for natural markets**

Jerad Jaborek ¹, Alejandro E. Relling ¹, Steven J. Moeller ¹, Henry N. Zerby ¹

¹The Ohio State University

8:15 a.m. PSV-37 **Relationships among carcass and sensory traits, auction price, and computer image analysis traits of marbling characteristics in Korean cattle beef**

Beak Seok-Hyeon ¹, Seung Ju Park ¹, Dilla Fassah ¹, HyunJin Kim ², Hyun Jung Lee ¹, Cheorun Jo ¹, Myunggi Baik ²

¹Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University, ²Seoul National University

8:15 a.m. PSV-36 **THE IMPACT OF SELECTION USING RESIDUAL AVERAGE DAILY GAIN AND MARBLING EPDs ON GROWTH PERFORMANCE AND CARCASS TRAITS IN ANGUS STEERS**

Taylor Krause ¹, Edward Moore ¹, Jason D. Duggin ¹, Jacob Segers ¹, Dean Pringle ²

¹University of Georgia, ²University of Florida

8:15 a.m. PSV-26 **The influence of breed, growing phase nutrition, and finishing system (pasture vs. feedlot) on the relative abundance of mRNA associated with lipid metabolism in longissimus muscle**

Juliana A. Torrecilhas¹, Elias San Vito², Larissa Fonseca¹, Tiago Simioni³, Josiane F Lages⁴, Giovanni Fiorentini⁵, Terry E. Engle⁶, Telma Berchielli⁷

¹São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, ²Federal University of Mato Grosso, ³São Paulo State University, ⁴ASAS, ⁵Federal University of Pelotas, ⁶Colorado State University, ⁷Sao Paulo State University

Breeding and Genetics Session I: Beef, Sheep and Goats

Chair: Luiz Brito, Purdue University

9:00 AM - 9:45 AM

Meeting Room 12B

9:00 a.m. 205 **Runs of Homozygosity and Analysis of Inbreeding Depression**

Pattarapol Sumreddee¹, Sajjad Toghiani², Andrew J. Roberts², El H. Hay², Samuel E. Aggrey³, Romdhane Rekaya¹

¹University of Georgia, ²USDA Agricultural Research Service, ³The University of Georgia

9:15 a.m. 206 **Quantifying the effect of phenotypic factors on pedigree lamb performance using the Irish national database; Sheep Ireland**

Nicola Fetherstone¹, Fiona McGovern², Tommy Boland³, Kevin McDermott⁴, Eamon Wall⁴, Noirin McHugh²

¹Teagasc and University College Dublin, ²Teagasc, ³UCD, ⁴Sheep Ireland

9:30 a.m. 207 **Structural conformation among spatially distributed West African dwarf goats as measures of adaptation to different environments**

Oluwatosin M. Jesuyon¹, Simeon O. Olawumi²

¹Federal University Oye-Ekiti, Ekiti State, Nigeria, ²Ekiti state University

Breeding and Genetics Session II: Swine I

Chair: Breno Fragomeni, University of Connecticut

9:00 AM - 10:30 AM

Meeting Room 14

9:00 a.m. 208 **Crossbred evaluations using single-step genomic BLUP and algorithm for proven and young with different sources of data**

Ivan Pocrnic¹, Daniela Lourenco¹, Ching-Yi Chen², Willian O. Herring², Ignacy Misztal¹

¹University of Georgia, ²Genus PIC

9:15 a.m. 209 **Genomic selection for multiple maternal and growth traits in large white pigs using Single-Step GBLUP**

Breno O. Fragomeni¹, Zulma Vitezica², Justine Liu¹, Yijian Huang³, Kent A. Gray³, Daniela Lourenco⁴, Ignacy Misztal⁴

¹University of Connecticut, ²INP ENSAT, ³Smithfield Premium Genetics, ⁴University of Georgia

9:30 a.m. 213 **Genomic selection of carcass quality traits in crossbred pigs using a reference population**

Matteo Bergamaschi ¹, Christian Maltecca ², Clint Schwab ³, Justin Fix ⁴, Francesco Tiezzi ²
¹Department of Animal Science, North Carolina State University, 27695, Raleigh, USA,
²North Carolina State University, ³The Maschhoffs, LLC, ⁴Acuity Ag Solutions, LLC

9:45 a.m. 212 **Genomic prediction of carcass average daily gain, fat and loin depth in three-way crossbred pigs including information collected on purebreds.**

Francesco Tiezzi ¹, Clint Schwab ², Justin Fix ³, Christian Maltecca ¹
¹North Carolina State University, ²The Maschhoffs, LLC, ³Acuity Ag Solutions, LLC

10:00 a.m. 210 **Genotype by environment interaction for pre-weaning survival in commercial crossbred pigs.**

Francesco Tiezzi ¹, Justin Fix ², Clint Schwab ³
¹North Carolina State University, ²Acuity Ag Solutions, LLC, ³The Maschhoffs, LLC

10:15 a.m. 211 **Changes in genetic parameters of fitness and growth traits under genomic selection in pigs**

Jorge Hidalgo ¹, Shogo Tsuruta ¹, Daniela Lourenco ¹, Yijian Huang ², Kent A. Gray ², Ignacy Misztal ¹
¹University of Georgia, ²Smithfield Premium Genetics

10:30 a.m. 434 **Late-Breaking: Expression of Growth hormone Gene (GH) and Insulin-like growth factor (IGF-2) in metabolic tissues of pigs are affected by unconventional dietary feed sources**

ufuoma G. Sorhue ¹, Ikenna S. Omeje ², Ifeanyichukwu udeh ³, Adimabua M. Moemeka ⁴, Raphael E. Onainor ⁴
¹Delta State College of Education Mosogar, ²Delta State University, Asaba Campus, ³Delta State University, Abraka, ⁴Delta State College of Education, Mosogar

Nonruminant Nutrition Session III: Lipid and Fatty Acids

Chair: R.D. Boyd, Hanor Company

9:00 AM - 10:30 AM

Meeting Room 9C

9:00 a.m. 283 **Ordered logistic regression analyze the effect of elements in serum and seminal plasma on abnormal sperm rate in boars**

Yinghui wu ¹, chao Wang ¹, Jian Peng ¹
¹Huazhong Agricultural University

9:15 a.m. 287 **Effect of lauric acid based additives on weaning piglets**

Cinta Sol ¹, Monica Puyalto ², Mario Lindenbeck ¹, Juan Jose Mallo ², Jürgen Zentek ³
¹Norel SA, ²Norel S.A., ³Freie Universität Berlin, Berlin, Germany, 14195

9:30 a.m. 286 **Effects of dietary peroxidized lipids and antioxidant supplementation in the drinking water on growth, oxidative and immune status of newly weaned piglets**
Ysenia Victoria Silva-Guillen ¹, Gabriela Martinez ¹, Consuelo Arellano ², Eric van Heugten ¹
¹Department of Animal Science, North Carolina State University, ²Department of Statistics ,
North Carolina State University

9:45 a.m. 285 **Black soldier fly (*Hermetia illucens*) larvae oil improves growth performance of nursery pigs**
Eric van Heugten ¹, Gabriela Martinez ¹, Alejandra McComb ², Liz Koutsos ³
¹Department of Animal Science, North Carolina State University, ²EnviroFlight LLC,
³EnviroFlight

10:00 a.m. 284 **Gene polymorphism of 5, 10-methylene tetrahydrofolate reductase is related to boar semen quality**
wen lai ¹, chao Wang ², Jian Peng ²
¹Huazhong agricultural university, ²Huazhong Agricultural University

10:15 a.m. 282 **Impact of dietary peroxidized lipids and antioxidant supplementation in feed on growth performance and oxidative status of newly weaned piglets**
Ysenia Victoria Silva-Guillen ¹, Gabriela Martinez ¹, Consuelo Arellano ², R.D. Boyd ³, Eric van Heugten ¹
¹Department of Animal Science, North Carolina State University, ²Department of Statistics ,
North Carolina State University, ³Hanor Company

10:30 a.m. 448 **Late-Breaking: GWAS analysis show QTL in horses which are characterized by sperm resistance to freezing**
Andrei A. Kudinov ¹, Natalia Dementieva ², Elena Nikitkina ³, Mikhail Atroshchenko ⁴, Artem Musidray ³
¹Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Science Center for Animal Husbandry, ²Russian Research Institute of Farm Animal Genetics and Breeding, ³Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Research Center for Animal Husbandry, ⁴The All-Russian Research Institute for Horse Breeding

**Animal Health Symposium: CSAS Technology in the Dairy Industry:
Old MacDonald or Brave New World?**

Chair: Christine Baes, Centre for Genetic Improvement of Livestock, University of Guelph,
Ontario, Canada & Institute of Genetics, Vetsuisse Faculty, University of Bern, Bern,
Switzerland

9:00 AM - 11:30 AM

Meeting Room 10A/B

9:00 a.m. **Animal Health CSAS Symposium Introduction**

9:05 a.m. 190 **ASAS-EAAP Exchange Speaker Talk: Beyond Stainless Steel and Milk Pumps: Precision Technology in the Milking Equipment World**
Nancy Charlton ¹
¹DeLaval

9:35 a.m. 188 **Using precision dairy tools to manage youngstock and dairy cattle: options and practical tools**

Joao H.C. Costa ¹

¹University of Kentucky

10:05 a.m. **Animal Health CSAS Symposium Break**

10:15 a.m. 189 **Choices Ahead for Dairy Cattle Breeding Programs**

Michael M. Lohuis ¹

¹Semex Alliance

10:45 a.m. 187 **Utilizing automation to improve efficiency, health, and production in the dairy industry**

Trevor DeVries ¹

¹University of Guelph

11:15 a.m. **Animal Health CSAS Symposium Q&A**

Beef Species Session I

Chair: Daniel Rivera, Animal and Dairy Sciences Department Mississippi State University

9:00 AM - 11:30 AM

Meeting Room 16A

9:00 a.m. 191 **Effects of feeding strategy on growth performance and semen quality of developing bulls**

Jarret A. Proctor ¹, Nathan S. Long ¹, Connor K. Biehler ¹, Liesel G. Schneider ², Justin D. Rhinehart ³, Lew G. Strickland ³, Jason K. Smith ¹

¹University of Tennessee, ²Animal Science Department, University of Tennessee Institute of Agriculture, ³University of Tennessee Institute of Agriculture

9:15 a.m. 197 **Gene-regulation control of muscle fatigue during transportation with rumen-protected methionine supplementation**

Gaston F. Alfaro ¹, Sonia J. Moisés ², Soren P. Rodning ¹, Taylor E. Novak ¹

¹Auburn University, ²Auburn University, Animal Science Department

9:30 a.m. 193 **Evaluation of copper and selenium metabolism in Bos Indicus and Bos Taurus cows.**

Juliana Ranches ¹, Matheus Picollo ¹, Gleise M. Silva ², Marcelo Vedovatto ³, Elizabeth A. Palmer ⁴, Vinicius N. Gouvêa ⁵, Aline Moreira ¹, Miguel Miranda ¹, Caio Aguiar ¹, Philippe Moriel ¹, Joao Vendramini ⁶, John Arthington ⁷

¹University of Florida, ²University of Florida, NFREC, ³Faculdade de Medicina Veterinária e Zootecnia, Universidade Federal de Mato Grosso do Sul, ⁴University of Florida - Range Cattle Research & Education Center, ⁵New Mexico State University, ⁶UF/IFAS - Range Cattle Research & Education Center, ⁷Department of Animal Sciences - University of Florida

9:45 a.m. 195 **Association of insulin, glucagon, and glucagon-like peptide-1 with production traits of growing and finishing beef heifers fed forage- and concentrate-based rations**

Andrew P. Foote ¹, Harvey C. Freetly ²

¹Oklahoma State University, ²USDA, ARS, U.S. Meat Animal Research Center

10:00 a.m. 192 **Effects of dam relative calving date on progeny performance**

Vitor R G. Mercadante ¹, Robin R. White ², John Currin ³, Heather L. Bradford ³, Sherrie Clarke ⁴, Jamie L. Stewart ³, Nicholas W. Dias ³, Claire L. Timlin ⁵, Stefania Pancini ³

¹Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences, ²Virginia Tech School of Animal Sciences, ³Virginia Tech, ⁴VA-MD College of Veterinary Medicine, ⁵Animal and Poultry Sciences, Virginia Tech

10:15 a.m. 194 **Effects of maternal behavior at calving, parity and season on dam behavior during fenceline weaning**

William C. Rutherford ¹, Jane A. Parish ², Sarah M. Montgomery-Williams ³

¹Animal and Dairy Sciences, Mississippi State University, ²North Mississippi Research and Extension Center, Mississippi State University, ³Mississippi State University

10:30 a.m. 196 **Udder and teat score changes with advancing age in crossbred beef cows and heifers**

Sarah M. Montgomery-Williams ¹, Jane A. Parish ², William C. Rutherford ³

¹Mississippi State University, ²North Mississippi Research and Extension Center, Mississippi State University, ³Animal and Dairy Sciences, Mississippi State University

10:45 a.m. 431 **Late-Breaking: The effects of including cotton byproducts in a finishing ration on the performance, carcass characteristics, and fecal characteristics of crossbred beef steers**

Andrea L. Warner ¹, PAUL A. BECK ², Andrew P. Foote ¹, Colton A. Robison ¹, Kaitlyn N. Pierce ¹, Blake K. Wilson ¹

¹Oklahoma State University, ²Oklahoma State University, Department of Animal & Food Sciences

11:00 a.m. 433 **Late-Breaking: Immune responsiveness of neonatal beef calves is altered by late gestational Cu, Zn, and Mn supplementation**

Emma L. Stephenson ¹, Meera C. Heller ², Ann L. Kenny ¹, Abigail R. Rathert-Williams ³, Heather A. Tucker ⁴, Allison M. Meyer ³

¹Division of Animal Sciences, University of Missouri, ²University of California, ³University of Missouri, ⁴Novus International

11:15 a.m. 432 **Late-Breaking: Relationship between animal temperament and levels of stress hormones, blood parameters and social interactions of beef cattle**

Diego Moya ¹, Paisley Johnson ², Tess D. Mills ²

¹Department of Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, ²University of Saskatchewan

**Breeding and Genetics Symposium II:
Challenges and Opportunities with Big Data in Animal Breeding**

Chair: Daniela Lourenco, University of Georgia
9:00 AM - 11:30 AM
Meeting Room 18B

9:00 a.m. **Breeding and Genetics Symposium II Introduction**

9:05 a.m. 226 **Genomics in animal agriculture: current technologies and applications**

Timothy P. Smith ¹

¹USDA, Agricultural Research Service, US Meat Animal Research Center

9:35 a.m. 229 **DNA Sequence Assisted Prediction: The Uncomfortable Truth**

Miguel Perez-Enciso ¹

¹Centre for Research in Agricultural Genomics

10:05 a.m. **Breeding and Genetics Symposium II Break**

10:20 a.m. 228 **ASAS-EAAP Exchange Speaker Talk: Big data and the development of resilience indicators for animal breeding**

Han A. Mulder ¹, Marieke Poppe ², Tom VL Berghof ³

¹Wageningen University and Research Animal Breeding and Genomics, ²PhD-student,

³Postdoc

10:50 a.m. 227 **Leveraging on High-throughput Phenotyping Technologies to Optimize Livestock Genetic Improvement and Husbandry**

Guilherme JM Rosa ¹, Joao R. R. Dorea ¹, Arthur Fernandes ², Tiago L. Passafaro ³

¹University of Wisconsin-Madison, ²Cobb-Vantress, ³Zoetis Genetics

Physiology Session I

Chair: Martin Maquivar, Washington State University. Department of Animal Sciences

9:00 AM - 11:15 AM

Meeting Room 10C

9:00 a.m. **Presentation of Awards: Animal Physiology and Endocrinology Award and Morrison Award**

Debra K. Aaron ¹, Steven A. Zinn ²

¹University of Kentucky, ²Dept. of Animal Science, University of Connecticut

9:10 a.m. 297 **Awardee Talk - Metabolites in stem cell differentiation and fetal development**

Min Du ¹

¹Washington State University

9:40 a.m. 295 **Awardee Talk: Novel regulation of growth hormone by kisspeptin**
James Sartin¹, Jay A. Daniel², Chad Foradori³, Brian Whitlock⁴
¹American Society of Animal Science, ²Berry College, ³Auburn University, ⁴University of Tennessee Institute of Agriculture

10:10 a.m. 299 **Treatment with prostaglandin F₂ α and an intravaginal progesterone insert in advance of gonadotropin-releasing hormone enhances response to estrus synchronization in mature beef cows**
Rachael C. Bonacker¹, Katy S. Stoecklein², Jaclyn N. Ketchum¹, Emma R. Knickmeyer¹, James William C. Locke¹, Scott E. Poock³, Jordan M. Thomas³
¹University of Missouri - Columbia, ²Division of Animal Sciences, University of Missouri, ³University of Missouri

10:25 a.m. **Physiology Session I Break**

10:30 a.m. 300 **Efficacy of the measurements of the vaginal electrical resistance to determine the phase of the estrous cycle in lactating dairy cattle**
Martin G. Maquivar¹, John Swain², Hannah Chiapetta³, Tynnetta Stumvoll³, Katelin Baker³, Grace Marchesseault³, Andrew Miller⁴, Michael Friend⁴, Marie Connett⁴, Parvati Patil⁴
¹Washington State University. Department of Animal Sciences, ²Washington State University, ³Washington State University. Department of Animal Sciences, ⁴Intellectual Ventures

10:45 a.m. 298 **Effects of parity on late gestational uterine blood flow and hemodynamics in beef cattle**
Allison M. Meyer¹, Natalie B. Duncan², Katy S. Stoecklein², Emma L. Stephenson²
¹University of Missouri, ²Division of Animal Sciences, University of Missouri

11:00 a.m. 296 **Effects of corticotropin-releasing hormone (CRH) and vasopressin (VP) challenge duration on complete blood count and serum metabolites of growing beef cattle**
Kendall L. Samuelson¹, Meagan D. Wright¹, John T. Richeson¹, Jennifer A. Hernandez Gifford², Nicole C. Sanchez³
¹West Texas A&M University, ²New Mexico State University, ³USDA-ARS Livestock Issues Research Unit, Lubbock, TX, 79403

11:15 a.m. 431 **Increasing IGF-1 concentrations in late pregnancy stimulates mammary development of gilts**
Chantal Farmer¹, Pieter Langendijk²
¹Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre, ²Murdoch University - School of Veterinary and Life Sciences

Meat Science and Muscle Biology Session

Chair: Dustin Boler, University of Illinois Urbana- Champaign

9:00 AM - 11:45 AM

Meeting Room 12A

9:00 a.m. 273 **The effect of fermented feed on meat quality, lipid antioxidant ability, lipid and protein metabolism in longissimus dorsi muscle of finishing pigs**

Xuefen Yang¹, Yueqin Qiu², Zongyong Jiang³

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ²State Key Laboratory of Livestock and Poultry Breeding; Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture; Guangdong Public Laboratory of Animal Breeding and Nutrition; Guangdong Key Laboratory of Animal Breeding and Nutrition; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ³Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China

9:15 a.m. 272 **High oxygen packaging is detrimental to beef flavor and tenderness**

Kelly R. Vierck¹, Jerrad F. Legako², Chance Brooks¹

¹Texas Tech University, ²Texas Tech University, Department of Animal and Food Sciences

9:30 a.m. 281 **Effects of feeding endophyte-infected tall fescue seed to Angus steers on ergovaline concentration, lipid oxidation, and skeletal metmyoglobin reductase activity**

Brandon McClenton¹, Jack Goodman², Oanh Dong³, Anuraj Sukumaran¹, Alexander Holtcamp¹, Caitlin Hart¹, Caleb O. Lemley¹, Glenn Aiken⁴, Wes Schilling¹, Brian Baldwin¹, Steven Martin¹, John Blanton⁵, Thu Dinh¹

¹Mississippi State University, ²University of Kentucky, ³N/A, ⁴USDA-ARS Forage Animal Production Research Unit, ⁵Purdue University

9:45 a.m. 274 **Improved beef quality and yield in Wagyu compared to Angus sired cattle unaffected by protein supplementation during the late gestation**

Xiangdong Liu¹, Natasha Moffitt-Hemmer¹, Jeanene M. de Avila¹, J. Shannon Neiberger¹, Jan Busboom¹, Mark Nelson¹, Min Du¹

¹Washington State University

10:00 a.m. **Meat Science and Muscle Biology Session Break**

10:15 a.m. 276 **Effects of *Hermetia illucens* larvae meal on growth performance, carcass traits, and meat quality in finishing pigs**

Xianyong Ma¹, miao yu¹, zhenming li¹, dun deng¹, ting rong¹

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences; State Key Laboratory of Livestock and Poultry Breeding; Key Laboratory of Animal Nutrition and Feed Science in South China, Ministry of Agriculture; Guangdong Public Laboratory of Animal Breeding and Nutrition; Guangdong Engineering Technology Research Center of animal Meat quality and Safety Control and Evaluation

10:30 a.m. 275 **Replacing cottonseed meal and sorghum grain with corn dried distillers grains with solubles in lamb feedlot diets: carcass characteristics and sensory panel traits**

Kade M. Hodges¹, Chris R. Kerth², Travis R. Whitney³, Wesley S. Ramsey¹, Kayley R. Wall¹, Zena M. Hicks⁴, Dylan H. Tucker¹, Dale R. Woerner⁵

¹Texas A&M University, Department of Animal Science, ²Texas A&M University, ³Texas A&M AgriLife Research, ⁴University of Nebraska-Lincoln, ⁵Texas Tech University

10:45 a.m. 278 **Replacing cottonseed meal and sorghum grain with corn dried distillers grains with solubles in lamb feedlot diets: volatile compounds from cooked lamb chops**

Chris R. Kerth¹, Kade M. Hodges², Kayley R. Wall², Zena M. Hicks³, Dylan H. Tucker², Travis R. Whitney⁴, Wesley S. Ramsey², Dale R. Woerner⁵

¹Texas A&M University, ²Texas A&M University, Department of Animal Science, ³University of Nebraska-Lincoln, ⁴Texas A&M AgriLife Research, ⁵Texas Tech University

11:00 a.m. 277 **Effects of cow supplementation on beef quality and expression of lipogenic and fibrogenic genes in the muscle of progenies fed diets with or without high inclusion of rumen-protected fat**

German Ramirez-Zamudio¹, Jon P. P. Schoonmaker², Wendell Cruz³, Flavio D Resende⁴, Gustavo R Siqueira⁴, Tathiane Gionbelli³, Ana Carolina Santos³, Marcio M. Ladeira³

¹Universidade Federal de Lavras, Brazil, ²Purdue University, ³Universidade Federal de Lavras, ⁴UNESP - Universidade Estadual Paulista and APTA - Agência Paulista de Tecnologia dos Agronegócios

11:15 a.m. 280 **Quality grading using color and electrical conductivity of beef**

C. Reed Richardson¹, Mala S. Ramkumar¹

¹Texas State University

11:30 a.m. 279 **Effects of pre-mortem stress on heat shock protein expression in the longissimus lumborum following harvest**

Reganne K. Briggs¹, Jerrad F. Legako², Paul R. Broadway³, Jeff A. Carroll⁴, Nicole C. Sanchez⁵, Zachary K. Smith⁶, Nikole E. Inek⁷, Kara J. Thornton-Kurth¹

¹Utah State University, ²Texas Tech University, Department of Animal and Food Sciences, ³USDA-ARS, ⁴USDA, ⁵USDA-ARS Livestock Issues Research Unit, Lubbock, TX, 79403, ⁶South Dakota State University, ⁷Animal Dairy and Veterinary Sciences, Utah State University, Logan, UT 84322

Contemporary and Emerging Issues Symposium II: Unstoppable Women in Ag
Chair: Todd Armstrong, DSM Nutritional Products; Beth Kegley, University of Arkansas
Division of Agriculture
9:00 AM - 12:00 PM
Meeting Room 9A

9:00 a.m. **Contemporary and Emerging Issues Symposium II Introduction**

9:05 a.m. 438 **Pigs Fly and so do Women**

Gretchen Myers Hill¹

¹Michigan State University

9:25 a.m. 439 **The changes in demographics and associated changes in diversity and “culture” within agricultural science**

Shannon Archibeque-Engle¹

¹Colorado State University

9:55 a.m. 436 **A career and research as a woman in agriculture**

Teresa A. Davis¹

¹USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine

10:25 a.m. **Contemporary and Emerging Issues Symposium II Break**

10:40 a.m. 437 **A career and teaching/extension as a woman in agriculture**

Kristen A. Johnson¹

¹Washington State University

11:10 a.m. 440 **A career and industry as a woman in agriculture**

Michelle S. Calvo-Lorenzo¹

¹Elanco Animal Health

11:40 a.m. **Contemporary and Emerging Issues Symposium II Panel Discussion**

Horse Species Symposium

Chair: Sarah White-Springer, Department of Animal Science, Texas A&M University; Texas

A&M AgriLife Research

9:00 AM - 12:00 PM

Ballroom F

9:00 a.m. 270 **Horses and the Horse Industry, Texas and Beyond**

Jim Heird¹

¹Texas A&M University

9:30 a.m. 266 **Using genomics to better understand muscle function and dysfunction**

Molly McCue¹

¹

10:00 a.m. **Horse Species Symposium Break**

10:15 a.m. 269 **Attempts to improve equine athletic performance via hypoxia-inducing techniques**

Brian D. Nielsen¹

¹Michigan State University

10:45 a.m. 268 **Using skeletal muscle mitochondrial profiles to create individual management programs for elite performance horses**

Sarah H. White-Springer¹

¹Department of Animal Science, Texas A&M University; Texas A&M AgriLife Research

11:15 a.m. 267 **Horse Species Symposium Panel Discussion**

Forages and Pastures Session

Chair: William Smith, Tarleton State University

9:00 AM - 12:15 PM

Meeting Room 13A/B

9:00 a.m. 264 **Using Bermudagrass Baleage to Increase Stocking Rates of Fall Wheat Pasture**

PAUL A. BECK¹, Caleb P. Weiss², Beth B. Kegley³, Tom Hess³, Don S. Hubbell²

¹Oklahoma State University, Department of Animal & Food Sciences, ²University of Arkansas, ³University of Arkansas Division of Agriculture

9:15 a.m. 263 **Interaction between stocking and supplementation rates on the performance of steers grazing mixed-grass prairie during winter**

Stacey A. Gunter¹

¹USDA-ARS, Oklahoma and Central Plains Agricultural Research Center

9:30 a.m. 256 **Rye with or without purple top turnips for stocker calf grazing as part of a Southeastern U.S. integrated crop-livestock system**

Jordan L. Cox-O'Neill¹, Grace C. Ott², Deidre D. Harmon¹, Matt H. Poore³, Joan H. Eisemann², Carrie L. Pickworth¹

¹North Carolina State University, ²North Carolina State University, Department of Animal Science, ³NC State University

9:45 a.m. 257 **Effects of Feeding Different Levels of Quebracho (*Schinopsis balansae*) Extract in a High-Roughage Total Mixed Ration on Seasonal Manure Gas Emissions**

Aaron B. Norris¹, Luis O. Tedeschi², Jamie L. Foster³, James P. Muir⁴, Bill E. Pinchak³

¹Texas Tech University, ²Texas A&M University, ³Texas A&M AgriLife Research, ⁴TAMU

10:00 a.m. 258 **Intake, digestibility and rumen fermentation in sheep offered alfalfa silage alone or alfalfa and tall fescue-mixtures harvested after a killing frost**

Valens Niyigena¹, Ken P. Coffey², W. K. Coblenz³, D. Philipp¹, C. Althaber¹, R. T. Rhein¹, M. C. Pruden¹

¹University of Arkansas Division of Agriculture, ²University of Arkansas, ³USDA-ARS Dairy Forage Research Center

10:30 a.m. 254 **Digestibility of sheep offered tall fescue, meadow fescue and orchardgrass grasses ensiled with slurry or commercial urea fertilization**
Jose M. Diaz ¹, Ken P. Coffey ¹, W. K. Coblenz ², D Philipp ³, Valens Niyigena ³, M. C. Pruden ³, Douglas D. Myers ¹

¹University of Arkansas, ²USDA-ARS Dairy Forage Research Center, ³University of Arkansas Division of Agriculture

10:45 a.m. 255 **Determining the Optimal Dose of Microbial Enzyme to Enhance Fiber Digestion**

Colton A. Althaber ¹, Ken P. Coffey ¹, Devan M. Paulus Compart ², Sarah Shelby ¹, Melanie Hays ¹, Valens Niyigena ³, John Bignar ¹

¹University of Arkansas, ²PMI, ³University of Arkansas Division of Agriculture

11:00 a.m. 265 **Determination of Microbial Enzyme Efficacy on Fiber Digestion of Bermudagrass Hay Supplemented with either DDGS or Corn**

Colton A. Althaber ¹, Ken P. Coffey ¹, Devan M. Paulus Compart ², Sarah Shelby ¹, Melanie Hays ¹, Valens Niyigena ³, John Bignar ¹

¹University of Arkansas, ²PMI, ³University of Arkansas Division of Agriculture

11:15 a.m. 262 **Brassicas as an Alternative Forage in the Northeastern United States**

Eric D. Billman ¹, S. Leanne Dillard ², Kathy J. Soder ¹

¹USDA-ARS, ²Auburn University

11:30 a.m. 259 **Screening of Lespedeza Germplasm for Forage Quality and Bioactivity.**

Thomas H. Terrill ¹, Breyanna Morning ¹, Erica Courson ¹, Bradley Morris ², Harley D. Naumann ³, Niki C. Whitley ¹, Vicki Owen ¹

¹Fort Valley State University, ²USDA/ARS/PGRCU, ³University of Missouri

11:45 a.m. 261 **Prescribed burning of endophyte-infected tall fescue pastures: Effects on forage production, ergot alkaloid concentrations, and stand composition**

Kevin R. MENG ¹, Eric Bailey ¹, Hannah Allen ¹, Derek W. Brake ¹

¹University of Missouri

12:00 p.m. 260 **Comparison of nutrients and in vitro degradability of ryegrass (*Lolium Multiflorum* L.) and alfalfa (*Medicago Sativa* L.) in central region of Turkey**

Mehmet Basalan ¹, A. Volkan Cetinkaya ²

¹Kirikkale University, TURKEY, ²Kirikkale University, College of Veterinary Medicine, Department of Animal Nutrition and Nutritional Diseases

Companion Animal Symposium III: Analytical Tools and Techniques to Advance Nutrition

Chair: Kelly Swanson, University of Illinois at Urbana-Champaign

9:30 AM - 12:30 PM

Meeting Room 15

9:30 a.m. **Companion Animal Symposium III Introduction**

9:45 a.m. 247 **Digestibility and Fermentation Models**

Trevor Faber¹

¹Trouw Nutrition

10:15 a.m. 248 **"Omics" Tools in Nutrition**

Rondo P. Middleton¹

¹Nestle Purina

10:45 a.m. **Companion Animal Symposium III Break**

11:00 a.m. 249 **Wearable Devices, Behavior, and Health Outcomes**

K. M. Carnagey¹

¹Hill's Pet Nutrition

11:30 a.m. 250 **Tracers for Tracking Energetics**

Leslie L. Mcknight¹

¹3Trouw Nutrition Canada Inc.

Breeding and Genetics Session III: Swine II

Chair: Breno Fragomeni, University of Connecticut

10:45 AM - 12:15 PM

Meeting Room 14

10:45 a.m. 214 **Correlation among host gut microbiome and their relationship with meat quality and carcass composition traits of swine**

Piush Khanal¹, Christian Maltecca¹, Clint Schwab², Justin Fix³, Francesco Tiezzi¹

¹North Carolina State University, ²The Maschhoffs, LLC, ³Acuity Ag Solutions, LLC

11:00 a.m. 215 **Selection response for meat quality and carcass composition in commercial pigs using crossbred and purebred traits as predictors**

Emmanuel A. Lozada-Soto¹, Justin Fix², Clint Schwab³, Francesco Tiezzi¹

¹North Carolina State University, ²Acuity Ag Solutions, LLC, ³The Maschhoffs, LLC

11:15 a.m. 219 **Relationship between host-genetics and the vaginal microbiome in commercial gilts**

Leticia P. Sanglard¹, Stephan Schmitz-Esser², Kent A. Gray³, Daniel Linhares², Carl J. Yeoman⁴, Jack C.M. Dekkers¹, Megan niederwerder⁵, Nick V. Serão¹

¹Department of Animal Science, Iowa State University, ²Iowa State University, ³Smithfield Premium Genetics, ⁴Montana State University, ⁵Kansas State University

11:30 a.m. 216 **Contribution of host gut microbiome in prediction of meat quality and carcass composition traits in swine**

Piush Khanal¹, Christian Maltecca¹, Clint Schwab², Justin Fix³, Francesco Tiezzi¹

¹North Carolina State University, ²The Maschhoffs, LLC, ³Acuity Ag Solutions, LLC

11:45 a.m. 218 **Quantifying resilience in growing pigs under a heavy disease challenge using daily individual feed intake records**

Austin M. Putz¹, John Harding², Micheal Dyck³, PigGen Canada⁴, Frederic Fortin⁵, Graham Plastow³, Jack C.M. Dekkers⁶

¹Hendrix Genetics (Hypor), ²Department of Large Animal Clinical Sciences, University of Saskatchewan, ³Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ⁴PigGen Canada, ⁵Centre de Développement du Porc du Québec Inc., ⁶Department of Animal Science, Iowa State University

12:00 p.m. 217 **Capturing genetic diversity – an assessment of the nation's gene bank in securing Duroc pigs**

Carrie S. Wilson¹, Gary Rohrer², Douglas W. Newcom³, Harvey D. Blackburn⁴

¹USDA-ARS National Animal Germplasm Program, ²US Meat Animal Research Center, ³National Swine Registry, ⁴USDA ARS National Animal Germplasm Program

Nonruminant Nutrition Session IV: Minerals and Vitamins

Chair: Terry Ward, Zinpro Corporation

10:45 AM - 12:30 PM

Meeting Room 9C

10:45 a.m. 291 **Effects of replacing inorganic trace minerals with low level of organic trace minerals on growth performance, tissue mineral deposition and mineral excretion in piglets**

xun pei¹, lujie liu¹, geng wang¹, minqi wang¹, Minyan huai²

¹College of Animal Science Zhejiang University, ²BASF (China) Co. , Ltd

11:00 a.m. 294 **The effects of titrated levels of water soluble zinc amino acid complex on immune response of nursery pigs**

Pornpim Aparachita¹, Scott Carter², Afton Sawyer², Jared Harshman², Terry Ward³, Zach Rambo³

¹Oklahoma State Univeristy, ²Oklahoma State University, ³Zinpro Corporation

11:15 a.m. **Nonruminant Nutrition Session IV: Minerals and Vitamins Break**

11:30 a.m. 288 **Se deficiency aggravates AFB1-induced immunotoxicity in chick spleen via regulating six selenoprotein and redox/inflammation/apoptotic signaling**

Ling Zhao¹, Yue Feng¹, Jiang Deng¹, Ni-Ya Zhang¹, Lv-hui Sun¹

¹Huazhong Agricultural University

11:45 a.m. 290 **Vitamin C, iron and phosphorous deposition in eggs of pullets fed dietary supplement of vitamin C and D at the mid laying phase**

Olusola O. Olomola¹, Olugbenga A. Ogunwole², Martha D. Olumide³, Folasade O.

Jemiseye⁴, Ireti A. Oludoyi⁴

¹Teaching and Research Farm, University of Ibadan, ²University of Ibadan, ³Babcock University, ⁴University of Ibadan - Department of Animal Science, Agricultural Biochemistry & Nutrition Unit

12:00 p.m. 293 **Effect of Activated Silicon Dioxide - 40microns - on Sow's Diets**
Lucio Araujo ¹, Caroline Decaux ², Yasmin Sartore ¹, Cristiane Araujo ³, Brunna Leite ¹,
Paulo Pelissari ¹, Rachel Carvalho ¹

¹University of Sao Paulo - Faculty of Animal Science and Food Engineering, ²Ceresco
Nutrition, ³University of Sao Paulo - School of Veterinary Medicine and Animal Science

12:15 p.m. 292 **Differential gene expression analysis for piglets supplied dietary
prebiotics and arachidonic acid for gastrointestinal disturbances**

Yuqing He ¹, Sheila K. Jacobi ², Christian Maltecca ¹, Jack Odle ¹

¹North Carolina State University, ²The Ohio State University

Comparative Gut Physiology Session

Chair: Jiangchao Zhao, University of Arkansas

11:30 AM - 12:15 PM

Meeting Room 10C

11:30 a.m. 253 **Glutamate and glutamine are the major metabolic fuels in
enterocytes of suckling piglets**

Wenliang He ¹, Yongqing Hou ², Guoyao Wu ¹

¹Department of Animal Science, Texas A&M University, ²Wuhan Polytechnic University

11:45 a.m. 252 **Combined soluble fiber improve the obesity phenotype and insulin
sensitivity of diet-induced obese mice by regulating the intestinal microbial
composition**

Chuanhui Xu ¹, Jianhua Liu ¹, Rong Zheng ¹, Jian Peng ¹

¹Huazhong Agricultural University

12:00 p.m. 251 **Oxidation of energy substrates in tissues of Largemouth bass
(*Micropterus salmoides*)**

Xinyu Li ¹, Guoyao Wu ²

¹Texas A&M University, ²Department of Animal Science, Texas A&M University

Poster Session VI

12:00 PM - 1:00 PM

Ballroom D

12:00 p.m. PSVI-13 **Anti-inflammatory effects of polyphenol-rich Red Osier
Dogwood extracts in Caco-2 mono- and Caco-2/EA.hy926 co-culture models**

Hua Zhang ¹, Yuhuan Chen ², Lili Mats ², Qianru Hui ³, Rong Tsao ¹, Chengbo Yang ⁴

¹Guelph Research and Development Centre, Agriculture and Agri-Food Canada, ²Agriculture
and Agri-Food Canada, ³University of Manitoba, ⁴Department of Animal Science, University
of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

12:00 p.m. PSVI-25 **Antimicrobial resistance profiles of *Pasteurella multocida*, *Mannheimia haemolytica* and *Moraxella* spp. of bovine origin pre- and post- treatment with antimicrobials in calves**

Lourdes Migura-Garcia ¹, Sonia Marti ², Anna Aris ³, Ana Perez de Rozas ¹, Carolina Tejero ⁴, Josep Torra ⁵, Joan Pujols ⁶, Maria Devant ²

¹Animal Health, CRESA, IRTA, ²IRTA, Ruminant Production, ³Ruminant Production, IRTA, ⁴MSD Animal Health, ⁵Cooperativa d'Ivars, ⁶IRTA-Animal Health

12:00 p.m. PSVI-11 **Antioxidative effects of red-osier dogwood extract on H2O2-treated human intestinal epithelial Caco-2 cells**

Runqiang Yang ¹, Shangxi Liu ², Qianru Hui ², Jiandong Wu ², Francis Lin ², Karmin O ³, chengbo Yang ⁴

¹Nanjing Agricultural University, ²University of Manitoba, ³St. Boniface Hospital Research Centre, ⁴Department of Animal Science, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

12:00 p.m. PSVI-32 **Comparison on Effect of Antibiotic Supplementation between Fast-growing Yellow-feathered broilers and Arbor Acres broilers**

tian sha ¹

¹hunan agriculture university

12:00 p.m. PSVI-26 **Cytological picture of the lymphoid tissue in the inguinal node with calval leptospirose**

Kirill Plemyashov ¹, Suleyman Suleymanov ², Konstantin Lobodin ³, Olga Pavlenko ²

¹Saint Petersburg State University of Veterinary Medicine, ²Voronezh State Agricultural University after Emperor Peter the Great, ³Voronezh State Agrarian University named after Emperor Peter the Great

12:00 p.m. PSVI-10 **Detection of *E. coli* Virulence Genes during the Pre-weaning and Peri-weaning Period in Young Meat Goats**

Eunice Ndegwa ¹, Aber Alahmde ¹

¹Virginia State University

12:00 p.m. PSVI-8 **Detoxification of zearalenone and deoxynivalenol by Biofix® Plus PRO in a molasses-based liquid feed supplement in an in vitro rumen batch culture system**

Paige N. Gott ¹, Dian Schatzmayr ²

¹BIOMIN America Inc., ²BIOMIN Holding GmbH

12:00 p.m. PSVI-14 **Differentially expressed microRNAs with potential regulatory roles in ileum of Holstein cows with subclinical Johne's disease**

Mengqi Wang ¹, Nathalie Bissonnette ², Philip Griebel ³, Pier-Luc Dudemaine ², Duy N. Do ⁴, Yongjiang Mao ⁵, Eveline M. Ibeagha-Awemu ⁴

¹Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre; College of Animal Science and Technology, Yangzhou University, ²Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada, ³VIDO-Intervac, University of Saskatchewan, ⁴Agriculture and Agri-Food Canada, ⁵College of Animal Science and Technology, Yangzhou University

12:00 p.m. PSVI-23 **Dynamics of cholesterol and triglycerides in the serum of cows with liver lipidosis**

Karina Moiseeva¹, Polina Anipchenko², Svetlana V. Vasileva³, Larisa Y. Karpenko⁴, Roman Vasil'ev⁵, Nina Pilaeva¹, Alesya A. Bakhta⁴, Anastasia A. Ignateva⁶, Vyacheslav A. Trushkin⁷, Georgiy Nikitin⁸, Anastasia A. Nikitina³, Olga N. Ershova¹

¹St. Petersburg State Academy of Veterinary Medicine, ²St. Petersburg State University of Veterinary Medicine, ³Saint Petersburg State University of Veterinary Medicine, ⁴Saint-Petersburg State University of Veterinary Medicine, ⁵St. Petersburg Academy of Veterinary Medicine, ⁶Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State University of Veterinary Medicine", ⁷Saint-Petersburg State University of Veterinary Medicine, ⁸Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine"

12:00 p.m. PSVI-6 **Effect of Cow Neutrophil Activation on Expression of T Cell Immunoglobulin and Mucin-Domain-Containing-Protein 3 (TIM-3) and its Ligand Galectin 9 Gene.**

Mulumbet Worku¹, Kingsley Ekwemalor²

¹NC A&T State University, ²North Carolina Agricultural and Technical State University

12:00 p.m. PSVI-42 **Effect of increasing concentrations of aflatoxins (AFB1) on rumen gas production (GP), dry matter (DM) disappearance and fermentation parameters using the in vitro ANKOM gas technique.**

JEAN-PHILIPPE MARDEN¹, VIRGINIE MARQUIS², KHEIRA HADJEBA MEDJDOUB³, MARINE LACOMBE³

¹PHILEO LESAFFRE ANIMAL CARE, ²SOCIETE INDUSTRIELLE LESAFFRE, ³PHILEO

12:00 p.m. PSVI-28 **Effects of Chinese herbal medicine and probiotics on the physicochemical properties of chicken**

Xiaofei Chen¹, Yunfen Zhu², Yongkang Yang², Jiqian XIANG¹, Hongqing Yin³, Jin Ma¹, Dejun Tan¹, Rong li¹

¹Enshi Autonomous Prefecture Academy of Agricultural Sciences, ²Institute of Animal Science, Enshi Autonomous Prefecture Academy of Agricultural Sciences, ³Enshi qingjiang biological engineering co. LTD

12:00 p.m. PSVI-37 **Effects of deoxynivalenol (DON) and selected feed additives on viability and tight junction integrity of IPEC-J2 cells**

Hang Lu¹, Kolapo M. Ajuwon¹

¹Purdue University

12:00 p.m. PSVI-40 **Effects of dietary glucan on intestinal morphology, immunity response, barrier function and antioxidant capacity in weaning pigs**

xia xiong¹, Lvliang Wu¹, Yirui Shao¹, Jian zou¹, Yulong Yin²

¹Institute of Subtropical Agriculture, Chinese Academy of Sciences, ²Institute of Subtropical Agriculture, Chinese Academy of Science

12:00 p.m. PSVI-12 **Effects of protease supplementation on growth performance, meat quality, serum biochemical parameters and apparent ileal amino acid digestibility in growing pigs fed diets containing different levels of sorghum**

Qianru Hui¹, Peng Lu², Ludovic Lahaye³, Jean-Christophe Bodin⁴, chengbo Yang⁵, Jun Fang⁶, Tiejun Li⁷

¹University of Manitoba, ²Department of Animal Science, University of Manitoba, ³Jefo, ⁴Jefo Nutrition Inc., ⁵Department of Animal Science, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada, ⁶Hunan Agricultural University, ⁷Institute of Subtropical Agriculture, The Chinese Academy of Sciences

12:00 p.m. PSVI-34 **Evaluating the impact of two Bacillus probiotic strains in commercial sows and their litters**

Mireia Saladrigas García¹, David Solà Oriol¹, Sergi López-Vergé², Agustina Rodríguez Sorrento¹, Bea Nielsen³, José Francisco Pérez⁴, Susana María Martín Orúe¹

¹Universitat Autònoma de Barcelona, ²Servei de Nutrició i Benestar Animal, Dept. de Ciència Animal i dels Aliments, UAB, 08193, ³Christian Hansen, ⁴Animal Nutrition and Welfare Service (SNIBA), Department of Animal and Food Science, Autonomous University of Barcelona, Bellaterra 08193, Spain

12:00 p.m. PSVI-24 **Evolution and risk factors of pulmonary lesions evaluated with thoracic ultrasonography in pre-weaned beef calves at arrival at the rearing facilities**

Carolina Tejero¹, Maria Devant², Joan Pujols³, Sonia Martí²

¹MSD Animal Health, ²IRTA, Ruminant Production, ³IRTA-Animal Health

12:00 p.m. PSVI-16 **Fecal microbiome of nursery pigs fed phytochemicals and antibiotics**

Huyen Tran¹, Timothy J. J. Johnson²

¹Purina Animal Nutrition, ²University of Minnesota

12:00 p.m. PSVI-22 **Immunity indicators of calves obtained from cows with ketosis during the treatment process**

Sergey Kovalev¹, Anastasia A. Nikitina², Polina Anipchenko³, Anatoly Stekolnikov⁴, Pavel Kiselenko¹, Yuiyriy Alekhin⁵

¹Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine", ²Saint Petersburg State University of Veterinary Medicine, ³St. Petersburg State University of Veterinary Medicine, ⁴Saint-Petersburg State Academy of Veterinary Medicine, ⁵State scientific institution All-Russian veterinary research institute of pathology, pharmacology, and therapy of the Russian academy of agricultural science

12:00 p.m. PSVI-38 **Impact of PRRSV infection during gestation on the protein levels in the blood of piglets**

Haley E. Rymut¹, Courtnei R. Bolt², Laurie A. Rund², Alexandra K. Houser³, Rodney W. Johnson², Sandra L. Rodrigues-Zas⁴

¹University of Illinois at Urbana-Champaign, ²University of Illinois, ³University of Illinois Department of Animal Sciences, ⁴University of Illinois at Urbana Champaign

12:00 p.m. PSVI-1 **Improvement of gut morphology and meat quality of broiler chickens by encapsulated citral and cinnamaldehyde**

Chongwu Yang¹, Janghan Choi², Marion Mogire², Argenis Rodas-Gonzalez², Moussa S. Diarra³, Qi Wang³, Joshua Gong⁴, chengbo Yang⁵

¹Department of Animal Science, University of Manitoba, ²University of Manitoba, ³Agriculture and Agri-Food Canada, ⁴Guelph Research and Development Centre, Agriculture & Agri-Food Canada, Guelph, Ontario N1G 5C9, Canada, ⁵Department of Animal Science, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

12:00 p.m. PSVI-27 **Kidney damage in cows with steatosis**

Anastasia A. Nikitina¹, Sergey Kovalev², Georgiy Nikitin², Kirill Plemyashov¹, Polina Anipchenko³, Anatoly Stekolnikov⁴, Andrey Nechaev⁵, Vitaliy Mikhalev⁶

¹Saint Petersburg State University of Veterinary Medicine, ²Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine", ³St. Petersburg State University of Veterinary Medicine, ⁴Saint-Petersburg State Academy of Veterinary Medicine, ⁵Saint-Petersburg State Academy of Veterinary Medicine, ⁶State scientific institution All-Russian veterinary research institute of pathology, pharmacology, and therapy of the Russian academy of agricultural science

12:00 p.m. PSVI-29 **Maternal immune activation alters inflammatory cytokine profiles in response to weaning**

Courtnei R. Bolt¹, Haley E. Rymut², Alexandra K. Houser³, Laurie A. Rund¹, Rodney W. Johnson¹, Sandra L. Rodrigues-Zas⁴

¹University of Illinois, ²University of Illinois at Urbana-Champaign, ³University of Illinois Department of Animal Sciences, ⁴University of Illinois at Urbana Champaign

12:00 p.m. PSVI-19 **Medical nutrition as a factor in increasing the adaptive potential of the honeybee**

Konstantin Rozhkov¹, Anatoliyi Kuznetsov¹, Irina Lunegova¹

¹Federal State Budgetary Institution of Higher Education "St. Petersburg State Academy of Veterinary Medicine"

12:00 p.m. PSVI-20 **Medicinal plants in adaptive feeding of honeybees**

Konstantin Rozhkov¹, Irina Lunegova¹, Anatoliyi Kuznetsov¹

¹Federal State Budgetary Institution of Higher Education "St. Petersburg State Academy of Veterinary Medicine"

12:00 p.m. PSVI-4 **Modulation of Galectin Gene Expression and Secretion in Cow Blood Stimulated with Phorbol 12-myristate 13-acetate**

Kingsley Ekwemalor¹, Mulumebet Worku²

¹North Carolina Agricultural and Technical State University, ²NC A&T State University

12:00 p.m. PSVI-39 **Molecular breeding value prediction of vaccination response against porcine reproductive and respiratory syndrome (PRRS) in replacement gilts**

Carlos Martin Aguilar-Trejo¹, Guillermo Luna-Nevárez¹, Javier Alonso Romo-Rubio², Milton G. Thomas³, R. Mark Enns³, Scott E. Speidel³, Xi Zeng³, Miguel Angel Sanchez-Castro³, Javier Rolando Reyna-Granados⁴, Pablo Luna-Nevárez¹

¹Instituto Tecnológico de Sonora, ²Universidad Autónoma de Sinaloa, ³Colorado State University, ⁴Instituto Tecnológico de Sonora

12:00 p.m. PSVI-9 **Occurrence of Mycotoxins in US Forage Grasses**

Paige N. Gott¹, Erika G. Hendel², Shelby M. Curry², Aaron M. Stam³

¹BIOMIN America Inc., ²BIOMIN America Inc, ³Federally Recognized Tribal Extension Program, University of Florida, Seminole Tribe of Florida

12:00 p.m. PSVI-30 **OmniGen-AF alters metabolic profile and blood cell populations in beef heifers subjected to repeated LPS challenges**

Shelby A. Armstrong¹, Molly J. Coehlo², Scott S. Bascom¹, Evin D. Sharman², Derek J. McLean¹, James D. Chapman¹

¹Phibro Animal Health Corporation, ²Phibro Animal Health

12:00 p.m. PSVI-21 **Peculiarities of the manifestation of bronchial asthma in cats in metropolis environment**

Liliia Sabirzianova¹, Polina Anipchenko², Anatolii Yashin¹, Vladimir Ponamarev¹, Vera Kriukova³, Nadezhda Kuznetsova¹, Alexander Lunegov¹, Nadezhda Andreeva¹, Nataliya Panova⁴, Veronika Guseva¹

¹Saint-Petersburg State Academy of Veterinary Medicine, ²St. Petersburg State University of Veterinary Medicine, ³Russia, Sain't Petersburg State academy of veterinary medicine,

⁴Saint Petersburg State University of Veterinary Medicine

12:00 p.m. PSVI-33 **Queen bees' artificial breeding using selenium compounds**

Mikhail Nevitov¹, Aleksandr Ostapchuk¹, Pavel Poluboyarinov², Aleksey Gamayunov¹, Polina Anipchenko³, Anatoly Stekolnikov⁴, Kirill Plemyashov⁵, Khamidulla Baymishev⁶, Georgiy Nikitin⁷, Andrey Nechaev⁸, Irina Melekhova⁹, Evgeniy Rybin⁴, Anastasia A. Nikitina⁵

¹Penza State Agrarian University, ²Penza State University of Architecture and Construction, ³St. Petersburg State University of Veterinary Medicine, ⁴Saint- Petersburg State Academy of Veterinary Medicine, ⁵Saint Petersburg State University of Veterinary Medicine, ⁶Samara State Agrarian University, ⁷Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine", ⁸Saint-Petersburg State Academy of Veterinary Medicine, ⁹Saint-Petersburg State University

12:00 p.m. PSVI-5 **Rumen-protected Methionine Supplementation during the Peripartal Period Reduces the Expression of LGALS-1, -3 and -4 in Polymorphonuclear Leukocytes (PMNL) and Secretion of Gal-2 and Gal-12 in plasma of Holstein Cows**

Emmanuel K. Asiamah¹, Mulumebet Worku², Juan Loor³, Mario Vailati Riboni⁴, Zheng Zhou⁵, Kingsley Ekwemalor⁶

¹University of Arkansas at Pine Bluff, ²NC A&T State University, ³University of Illinois Urbana Champaign, ⁴University of Illinois Urbana-Champaign, ⁵Michigan State University, ⁶North Carolina Agricultural and Technical state university

12:00 p.m. PSVI-31 **Special characteristics of the Pseudomonas aeruginosa strains in animal and poultry farms in the areas with various levels of technogenic pollution**
Irina Donnik ¹, Anna Krivonogova ², Albina Isaeva ³, Irina Shkuratova ², Kseniya Moiseeva ¹, Nina Musikhina ¹

¹1- Federal State Budgetary Educational Institution of Higher Education "Ural State Agrarian University" (FSBEI HE Ural SAU), 42, K. Liebknechta St., Ekaterinburg, ²2- Federal State Budgetary Scientific Institution "Ural Federal Agrarian Scientific Research Centre, Ural Branch of the Russian Academy of Sciences" (FSBSI UrFASRC, UrB of RAS), 112 A, Belinskogo St., Ekaterinburg; 1- Federal State Budgetary Educational Institution of Higher Education "Ural State Agrarian University" (FSBEI HE Ural SAU), 42, K. Liebknechta St., Ekaterinburg, ³1- Federal State Budgetary Educational Institution of Higher Education "Ural State Agrarian University" (FSBEI HE Ural SAU), 42, K. Liebknechta St., Ekaterinburg; 2- Federal State Budgetary Scientific Institution "Ural Federal Agrarian Scientific Research Centre, Ural Branch of the Russian Academy of Sciences" (FSBSI UrFASRC, UrB of RAS), 112 A, Belinskogo St., Ekaterinburg

12:00 p.m. PSVI-35 **The combined effects of early-socialization of piglets and neonatal enriched environment on intestinal gene expression and fecal community structure**

Mireia Saladrigas García ¹, Heng Lun Ko ¹, Agustina Rodríguez Sorrento ¹, Pol Llonch Obiols ¹, José Francisco Pérez ², Susana María Martín Orúe ¹
¹Universitat Autònoma de Barcelona, ²Animal Nutrition and Welfare Service (SNIBA), Department of Animal and Food Science, Autonomous University of Barcelona, Bellaterra 08193, Spain

12:00 p.m. PSVI-41 **The comparative analysis of vaginal flora of high-productive cows in the postpartum period by Real-time PCR**

Elena A. Korochkina ¹, Andrey Nechaev ², Anatoly Stekolnikov ³, Anatoliy Nezhdanov ⁴
¹Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State Academy of Veterinary Medicine", ²Saint-Petersburg State Academy of Veterinary Medicine, ³Saint-Petersburg State Academy of Veterinary Medicine, ⁴State scientific institution All-Russian veterinary research institute of pathology, pharmacology, and therapy of the Russian academy of agricultural science

12:00 p.m. PSVI-2 **The effect of a recombinant Mannheimia haemolytica leukotoxin on the health and growth performance of high-risk, newly received stocker cattle metaphylactically treated with tilmicosin**

Autumn T. Pickett ¹, Jase Ball ¹, Beth B. Kegley ², Ken Blue ³, Jacob A. Hagenmaier ³, Jana L. Reynolds ⁴, Jeremy G. Powell ⁴
¹University of Arkansas, ²University of Arkansas Division of Agriculture, ³Elanco Animal Health, ⁴University of Arkansas System Division of Agriculture

12:00 p.m. PSVI-3 **The effect of oligodeoxynucleotides on Toll-like receptor pathway genes in goat blood.**

Kingsley Ekwemalor ¹, Mulumebet Worku ²

¹North Carolina Agricultural and Technical State University, ²NC A&T State University

12:00 p.m. PSVI-17 **The organic feed additive Calica+ improves growth performance and shows anticoccidial effects in broilers.**

Yan Martel-Kennes¹, Caroline Decaux², Carl Julien³

¹Université Laval, ²Ceresco Nutrition, ³CRSAD

12:00 p.m. PSVI-18 **The use of Spirulina in piglet's diets: effects on growth performance, selected biochemical blood parameters and small intestine mucosa morphology and metabolomics profiles**

Cátia F. Martins¹, Manolis Matzapetakis², David D. Ribeiro¹, Mário Pinho³, João Pedro Bengala Freire¹, José A M. Prates³, Andre M. Almeida⁴

¹LEAF, Instituto Superior de Agronomia / University of Lisbon, ²Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa, ³CIISA, Faculdade de Medicina Veterinária, Universidade de Lisboa, ⁴LEAF, Instituto Superior de Agronomia, Universidade de Lisboa

12:00 p.m. PSVI-15 **Transcriptome analysis of ileal lymph nodes identifies key microRNAs affecting disease progression in Holstein cows with subclinical Johne's disease**

Mengqi Wang¹, Nathalie Bissonnette², Philip Griebel³, Pier-Luc Dudemaine², Duy N. Do⁴, Eveline M. Ibeagha-Awemu⁴

¹Agriculture and Agri-Food Canada, Sherbrooke Research and Development Centre; College of Animal Science and Technology, Yangzhou University, ²Sherbrooke Research and Development Centre, Agriculture and Agri-Food Canada, ³VIDO-Intervac, University of Saskatchewan, ⁴Agriculture and Agri-Food Canada

12:00 p.m. PSVI-36 **Transcriptome analysis of porcine tonsils following PRRS virus infection**

Haesu Ko¹, Won-Il Kim², Han-Hwa Chae¹, Won-Chul Park¹, Jong-Eun Park¹, Jihye Cha¹, Mi-Rim Park¹, Yeong-jo Im¹, Bong-Hwan Choi³

¹National Institute of Animal Science, ²Chonbuk National University, ³National institute of animal science

12:00 p.m. PSVI-7 **Variation in bitter taste receptor genes in three breeds of goats.**

Mulumbet Worku¹, Kingsley Ekwemalor²

¹NC A&T State University, ²North carolina Agricultural and Technical state university

CSAS Annual General Meeting and Lunch

12:30 PM - 2:00 PM

Salon J

Poster Session VII

1:00 PM - 2:00 PM

Ballroom D

1:00 p.m. PSVII-28 **Additivity of energy concentrations and phosphorus and calcium digestibility in hatchery byproducts fed to nursery pigs**

Jung Y. Sung¹, Beob G. Kim¹

¹Konkuk University

1:00 p.m. PSVII-9 **Agronomic characteristics and nutrient composition of purple prairie clover grown under irrigated and dryland conditions**

Yuxi Wang ¹, Alan Iwaasa ², Zhong-Jun Xu ¹, Surya Acharya ¹, Tim A. McAllister ¹

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Swift Current Research and Development Centre, Agriculture and Agri-Food Canada

1:00 p.m. PSVII-31 **Animal Acceptability and Performance Trail of Olive Pomace on Gallus gallus domesticus**

Benny J. Conn ¹, Stanley F. Kelley ¹, Marcy M. Beverly ¹, Mark Anderson ¹, Payton Snokhous ¹

¹Sam Houston State University

1:00 p.m. PSVII-3 **Body temperature and movement patterns of Raramuri Criollo versus Angus-crossbred cows grazing Chihuahuan Desert rangeland in summer**

Andres Cibils ¹, Rick Estell ², Alfredo Gonzalez ², Sheri Spiegel ², Martha Anderson ³, Caitriana Steele ², Guadalupe Continanza ¹

¹Department of Animal Science, New Mexico State University, ²USDA-ARS Jornada Experimental Range, ³USDA-ARS Hydrology and Remote Sensing Laboratory

1:00 p.m. PSVII-21 **Determination of apparent and standardized ileal digestibility of amino acids in various hatchery by-products for broiler chickens**

Geun Hyeon Park ¹, Hyeon Seok Choi ¹, Jong Hyuk Kim ¹, Gi Ppeum Han ¹, Sang Yun Ji ², Dong Yong Kil ¹

¹Chung-Ang University, ²Rural Development Administration

1:00 p.m. PSVII-33 **Determination of serotonergic receptor profiles in equine palmar artery and vein and uterine artery**

James L. Klotz ¹, Karen McDowell ²

¹Forage-Animal Production Research Unit, USDA-ARS, ²University of Kentucky

1:00 p.m. PSVII-16 **Dietary creatine and sulfur amino acids for finishing gilts**

Natália Y. Sitanaka ¹, Lucas Antonio C. Esteves ¹, Alice Murakami ¹, Eliane Gasparino ¹, Angélica Khatlab ¹, Paulo C. Pozza ²

¹Universidade Estadual de Maringá, ²State University of Maringá

1:00 p.m. PSVII-34 **Digestibility and growth performance of growing pigs, fed corn or wheat diets supplemented with xylanase**

Dakota L. Wightman ¹, Denise A. Beaulieu ¹

¹University of Saskatchewan

1:00 p.m. PSVII-22 **Effect of dietary supplementation of vitamin C on productive performance, egg quality, relative organ weight, and tibia strength of laying hens**

Jomari B. Delos Reyes ¹, Jong Hyuk Kim ¹, Geun Hyeon Park ¹, Hyeon Seok Choi ¹, Gi Ppeum Han ¹, Hwan Ku Kang ², Dong Yong Kil ¹

¹Chung-Ang University, ²Poultry Research Institute/ Rural Development Administration National Institute of Animal Science

1:00 p.m. PSVII-10 **Effect of Lactobacillus spp. and Saccharomyces cerevisiae alone or in combination on the fermentation and aerobic stability of whole-crop corn silage**

Jayakrishnan Nair ¹, Yuxi Wang ¹, Shanwei Xu ², Brenda Smiley ³, Hee Eun Yang ¹, Tim A. McAllister ¹

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Alberta Agriculture and Forest, ³Corteva Agriscience

1:00 p.m. PSVII-12 **Effect of planting method on forage production of annual ryegrass and stocker performance**

Guillermo Scaglia ¹

¹LSU AgCenter Iberia Research Station

1:00 p.m. PSVII-15 **Effect of protocatechuic acid on growth performance, inflammatory status and immune indices in weaned piglets**

shusong Wu ¹, Ruizhi Hu ¹, Ziyu He ¹, Jie Liu ¹, Ming Liu ¹, Jijun Tan ¹, Jianhua He ¹, Zehe Song ²

¹College of Animal Science and Technology, Hunan Agricultural University, ²Hunan Agricultural University

1:00 p.m. PSVII-7 **Effects of alkali treatment on nutrient content and ergot alkaloid concentration in tall fescue silage**

Hannah Allen ¹, Eric Bailey ¹, Kevin R. MENG ¹

¹University of Missouri

1:00 p.m. PSVII-13 **Effects of corn supplementation on muscle microRNA profiles within horses**

Clarissa M. Carver ¹, Tanja Hess ¹, Jason Bruemmer ¹, Stephen J. Coloman ¹, Gabriele Landolt ¹

¹Colorado State University

1:00 p.m. PSVII-27 **Effects of dietary near ideal amino acid profile on amino acid utilization efficiency for milk production in sows under thermoneutral or heat stress conditions**

Sai Zhang ¹, Jay S. Johnson ², Nathalie Trottier ¹

¹Department of Animal Science, Michigan State University, ²USDA-ARS Livestock Behavior Research Unit

1:00 p.m. PSVII-26 **Effects of different probiotics on laying performance, egg quality, oxidative status, and gut health in laying hens**

Quanhang Xiang ¹, Jian Peng ¹

¹Huazhong Agricultural University

1:00 p.m. PSVII-1 **Effects of exogenous fibrolytic enzymes on the release of xylo-oligosaccharides from six varieties of wheat in-vitro.**

Tom N. Dale ¹, Tim Parr ², Julie King ², John Brameld ²

¹University of Nottingham, ²university of Nottingham

1:00 p.m. PSVII-36 **Examining the effect of a physiological dose of the polyamine; spermine, on myogenic regulatory transcription factor expression.**

avani gouru ¹, Gordon Murdoch ¹

¹University of Idaho

1:00 p.m. PSVII-32 **Fat Analysis and Sensory Trial on Gallus gallus domesticus fed Olive Pomace**

Benny J. Conn ¹, Payton Snokhous ¹, Stanley F. Kelley ¹, Marcy M. Beverly ¹, Mark Anderson ¹, Jerrad F. Legako ²

¹Sam Houston State University, ²Texas Tech University, Department of Animal and Food Sciences

1:00 p.m. PSVII-35 **Fecal inocula from horses fed DigestaWell® Fiber improves in-vitro dry matter digestibility of commercial hays in horses**

Brittany S. Perron ¹, Ashley L. Wagner ², Jamie A. Boyd ¹, Bertrand MEDINA ³, Ivan, D. Girard ³, Noheli Gutierrez ¹, Justin C. Burt ¹, Rebecca K. Splan ⁴

¹Sul Ross State University, ²Probiotech International, Inc., ³Probiotech International Inc.,

⁴Delaware Valley University

1:00 p.m. PSVII-37 **First molecular detection of Equine Herpesvirus type 2 (EHV-2) and type 5 (EHV-5) in upper respiratory liquids of healthy training horses from southern Brazil**

Janaina S S. Biava ¹, Mariane Angélica Finger ², Leila Ullmann ³, Alexander Biondo ², Christian Leutenegger ⁴, Ivan Barros Filho ²

¹ASAS, ²UFPR/Federal University of Paraná, ³UNESP – State University of São Paulo,

⁴IDEXX Laboratories

1:00 p.m. PSVII-24 **Growth performance and organ weight of weaned pigs fed diets with different fiber and fat sources**

Jinsu Hong ¹, Tofuko A. Woyengo ²

¹Department of Animal Science, South Dakota State University, ²Assistant professor

1:00 p.m. PSVII-42 **Growth performance, gut health, and immune responses of Escherichia coli-challenged weaned pigs fed probiotic-supplemented diets**

Sangwoo Park ¹, Jinsu Hong ², David Francis ³, Caroline Gonzalez Vega ⁴, John K. Khun Kyaw Htoo ⁵, Tofuko A. Woyengo ⁶

¹Chungnam National University, ²Department of Animal Science, South Dakota State University, ³Department of Veterinary & Biomedical Sciences, South Dakota State University, ⁴Cargill Animal Nutrition, ⁵Evonik, ⁶Assistant professor

1:00 p.m. PSVII-39 **Impact of Reducing Dietary Fermentable Protein Level on Growth Performance in Nursery Pigs**

Pengcheng Xue ¹, Sara Ebarb ¹, Sabrina Williams ², James Jolliff ³, Junmei Zhao ⁴, Qingyun Li ¹

¹Cargill Animal Nutrition, ²Provimi, ³Provimi North America, ⁴Cargill

1:00 p.m. PSVII-30 **Impacts of Starch and Fat Concentrations on Equine Insulin Sensitivity**

Tanner P. Price¹, Claire B. Gleason¹, Douglas M. Liebe¹, Ty C. Davis¹, Linda Beckett¹, Robin R. White²

¹Virginia Tech, ²Virginia Tech School of Animal Sciences

1:00 p.m. PSVII-38 **Increased activity in horses following reapplication of shoes**

Rosemary Groux¹, Brian Whitlock², Peter D. Krawczel³, Amanda Lee², Jay A. Daniel¹

¹Berry College, ²University of Tennessee Institute of Agriculture, ³The University of Tennessee

1:00 p.m. PSVII-40 **Influence of mare body fat measures on colostrum composition**

Brianna Carillo¹, Jessica L. Leatherwood¹, Christine Latham¹, Emily Dickson¹, Martha Vogelsang¹

¹Texas A&M University

1:00 p.m. PSVII-2 **Influence of source and concentration of phosphorus on apparent ileal digestibility and apparent total tract digestibility of phosphorus in growing pigs**

AYODEJI S. ADERIBIGBE¹, Olayiwola Adeola²

¹Department of Animal Sciences, Purdue University, ²Purdue University

1:00 p.m. PSVII-25 **Intra-Farm Variability: Growing pigs have different SID Lys:NE requirements depending on their BW category**

Pau Aymerich¹, Carme Soldevila¹, Jordi Bonet¹, Josep Gasa², Jaume Coma¹

¹Vall Companys Group, ²Animal Nutrition and Welfare Service (SNIBA), Department of Animal and Food Science, Autonomous University of Barcelona, Bellaterra 08193, Spain

1:00 p.m. PSVII-41 **Mare colostrum and milk composition through 36 h post-parturition**

Brianna Carillo¹, Jessica L. Leatherwood¹, Christine Latham¹, Emily Dickson¹, Martha Vogelsang¹

¹Texas A&M University

1:00 p.m. PSVII-20 **Meta-analysis: Effect of increasing dietary calcium and phytase dose on phosphorus digestibility in weaning piglets and growing pigs**

Deepak E Velayudhan¹, Leon Marchal², Yueming Dersjant-Li³

¹Danisco Animal Nutrition, IFF, ²DuPont Nutrition and Biosciences, ³Danisco Animal Nutrition (IFF)

1:00 p.m. PSVII-11 **Monensin and supplementation level effects on ruminal parameters and in-situ disappearance of steers receiving bermudagrass**

Jhone de Sousa¹, Joao Vendramini², Philippe Moriel³, Hiran Silva³, Joao Sanchez¹, Luciano de Sousa⁴

¹Ph.D. Student, ²UF/IFAS - Range Cattle Research & Education Center, ³University of Florida, ⁴Assistant Professor

1:00 p.m. PSVII-18 **Nitrogen Fertilization Affects Leaf-Level Sodium and Potassium Concentration in Tall Fescue Pasture**

Joshua A. Tooley¹, Harley D. Naumann², David G. Mendoza-Cozatl¹

¹University of Missouri-Columbia, ²University of Missouri

1:00 p.m. PSVII-23 **Phylogenetic analysis of mitochondrial DNA D-loop region for excavated horse bones at the Asian archaeological sites**

Jihye Cha¹, Haesu Ko¹, Bong-Hwan Choi², Gulwon Jang¹, Dajeong Lim¹, Jong-Eun Park¹, Han-Hwa Chae¹, Won-Chul Park¹, Chang-Yeon Cho³

¹National Institute of Animal Science, ²National institute of animal science, ³NIAS

1:00 p.m. PSVII-6 **Precision feeding and reduced crude protein on nitrogen efficiency of pigs raised under tropical conditions**

Luan S. Santos¹, Dani Perondi², Alini M. Veira³, Jaqueline Gobi⁴, Candido Pomar⁵

¹Federal Rural University of Rio De Janeiro, Seropédica, Brazil, ²Master Agroindustrial, ³FAPESP Scholarship, São Paulo State University, Jaboticabal, Brazil, ⁴Sao Paulo State University, ⁵AAFC

1:00 p.m. PSVII-4 **Ruminal fermentation and enteric methane production of legumes containing condensed tannins fed in continuous culture**

Kathy J. Soder¹, Ana Roca-Fernandez¹, S. Leanne Dillard²

¹USDA-ARS, ²Auburn University

1:00 p.m. PSVII-5 **Soil parameters affect ammonia fluxes from livestock urine and urea fertilizer**

Vanessa Z. Longhini¹, Abmael S. da Silva Cardoso², Andressa S. Scholz Berca³, Pedro H. Gonçalves¹, Robert M. Boddey⁴, Ricardo Reis⁵, Jose C. B. Dubeux⁶

¹São Paulo State University, ²FCAV/ Unesp - Jaboticabal, ³Department of Animal Science/Texas A&M University, ⁴Embrapa Agrobiologia, ⁵Department of Animal Science, Unesp, Jaboticabal, ⁶University of Florida, NFREC

1:00 p.m. PSVII-17 **The relationship of biochemistry of seminal plasma, ejaculate volume and sperm concentration in horses**

Mikhail Atroshchenko¹, Elena Nikitkina², Valeriy Kalashnikov³, Alexander Zaitcev³, Valentina Zvyagina⁴, Maria Fomina⁵, Anna Shitikova⁵, Artem Musidray², Kirill Plemyashov⁶

¹The All-Russian Research Institute for Horse Breeding, ²Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Research Center for Animal Husbandry, ³The All-Russian Research Institute for Horse Breeding, Divovo, Russia, ⁴Ryazan State Medical University, Ryazan, ⁵Ryazan State Medical University, ⁶Saint Petersburg State University of Veterinary Medicine

1:00 p.m. PSVII-14 **Toxic and essential elements in seminal plasma and serum in stallions**

Valeriy Kalashnikov ¹, Mikhail Atroshchenko ², Alexander Zaitcev ¹, Shakur Makaev ³, Oleg Zavjalov ⁴, Alexey Frolov ⁵, Kirill Plemyashov ⁶, Anna Krutikova ⁷

¹The All-Russian Research Institute for Horse Breeding, Divovo, Russia, ²The All-Russian Research Institute for Horse Breeding, ³Federal Research Centre of Biological Systems and Agrotechnologies of the Russian Academy of Sciences, ⁴All-Russian Research Institute of beef cattle breeding, ⁵Federal Research Centre of Biological Systems and Agrotechnologies, RAS, ⁶Saint Petersburg State University of Veterinary Medicine, ⁷Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Research Center for Animal Husbandry

1:00 p.m. PSVII-19 **Transcriptomic analysis of the liver of laying hens fed diets containing supplemental fat at early laying stages**

Gi Ppeum Han ¹, Geun Hyeon Park ¹, Jong Hyuk Kim ¹, Hyeon Seok Choi ¹, Hwan Ku Kang ², Dong Yong Kil ¹

¹Chung-Ang University, ²Poultry Research Institute/ Rural Development Administration National Institute of Animal Science

1:00 p.m. PSVII-8 **Trends in the Unwanted Horse Population in the US Pacific Northwest**

Shayna Nagy ¹

¹Washington Sate University. Department of Animal Sciences

1:00 p.m. PSVII-29 **Validation of prediction equations for digestibility of energy and amino acids in commercial pigs using mini pigs**

Bokyung Hong ¹, John K. Khun Kyaw Htoo ², Caroline González-Vega ³, Beob G. Kim ¹

¹Konkuk University, ²Evonik, ³Evonik Operations GmbH

Animal Behavior and Well-Being Symposium II: Sponsored by ELANCO

Chair: Michelle Calvo-Lorenzo, Elanco Animal Health

1:00 PM - 5:00 PM

Meeting Room 10A/B

1:00 p.m. **Animal Behavior Symposium II Sponsored by ELANCO Introduction**

1:05 p.m. 184 **Review of Animal Welfare Data for Cattle and Swine**

Michelle S. Calvo-Lorenzo ¹

¹Elanco Animal Health

1:55 p.m. 185 **Impact of labor issues on animal welfare**

Courtney L. Daigle ¹

¹Department of Animal Science, Texas A&M University

2:45 p.m. **Animal Behavior Symposium II Sponsored by ELANCO Break**

2:55 p.m. 183 **Food Animal Welfare: Why Producers Should Care about Animal Welfare**

Karen Christensen ¹

¹Tyson Foods

3:45 p.m. 186 **To Tweet or Not to Tweet: What does Science Communication Look like in 2019?**

Sara E. Place ¹

¹National Cattlemen's Beef Association

Breeding and Genetics Session IV: Other Species

Chair: Luiz Brito, Purdue University

2:00 PM - 3:15 PM

Meeting Room 12B

2:00 p.m. 221 **Effect of age and rut period on the semen quality in reindeer (Rangifer tarandus)**

Elena Nikitkina ¹, Artem Musidray ¹, Anna Krutikova ¹, Svetlana Timofeeva ², Kirill Plemiyashov ³, Polina Anipchenko ², Vasilii Goncharov ⁴

¹Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Research Center for Animal Husbandry, ²Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Science Center for Animal Husbandry, ³Saint Petersburg State University of Veterinary Medicine, ⁴Research Institute of Agriculture and Ecology of the Arctic – Branch of the «Federal Research Center «Krasnoyarsk Science Center»

2:15 p.m. 222 **Sire influence on hatchability and heritability estimates of quails in a humid tropical environment.**

Uma k. oke ¹, obioma chinadum ¹

¹UNIVERSITY

2:30 p.m. 220 **Mitochondrial DNA polymorphism as a measure of genetic diversity in African Tilapia fish**

Ekei Ikpeme ¹, Ekerette Ekerette ², Michael Ozoje ³

¹University of Calabar-Nigeria, ²University of Calabar, ³Federal University of Agriculture, abeokuta

2:45 p.m. 223 **Lesch-Nyhan syndrome: from patient to mouse model**

Marina V. Kubekina ¹, Vladislav A. Kalmykov ¹, Pavel A. Kusov ², Yulya Y. Silaeva ¹, Alexei V. Deikin ¹

¹Institute of gene biology Russian academy of sciences, ²Institute of gene biology Russian Academy of Sciences

3:00 p.m. 224 **Automatic image feature extraction for genetic analysis in cattle**

Jessica Nye ¹, Laura Zingaretti ², Miguel Perez-Enciso ¹

¹Centre for Research in Agricultural Genomics, ²Centre for research in Agricultural Genomics

Beef Species Session II

Chair: Daniel Rivera, Animal and Dairy Sciences Department Mississippi State University
2:00 PM - 4:15 PM
Meeting Room 13A/B

2:00 p.m. 204 **Relationships between semen quality and scrotal circumference, adiposity, and rumen conditions of developing bulls**

Jarret A. Proctor¹, Nathan S. Long¹, Connor K. Biehler¹, Liesel G. Schneider², Justin D. Rhinehart³, Jason K. Smith¹

¹University of Tennessee, ²Animal Science Department, University of Tennessee Institute of Agriculture, ³University of Tennessee Institute of Agriculture

2:15 p.m. 199 **Beef Cattle Genetic Technology Utilization - Survey of Stakeholders 2018**

Robert L. Weaber¹, Larry A. Kuehn², Warren Snelling², Mark Thallman², Bruce L. Golden³, Matt L. Spangler⁴

¹Kansas State University, ²USDA ARS U.S. Meat Animal Research Center, ³Theta Solutions, LLC, ⁴University of Nebraska-Lincoln

2:30 p.m. 203 **Development and evaluation of a dynamic simulation model of farm management strategies affecting the reproductive performance of a suckled beef cow herd**

Richard Lynch¹, Paul Crosson¹, Alan K. Kelly², David A. Kenny³

¹Teagasc, ²University College Dublin, ³Teagasc Animal and Grassland Research and Innovation Centre, Grange, Dunsany, Co. Meath, Ireland

2:45 p.m. 200 **Effect of value-added health protocols within region on the sale price of beef calf lots sold through summer video auctions from 2010 through 2018**

Maggie J. Smith¹, Esther D. McCabe¹, Micheal E. King¹, Karol E. Fike¹, Glenn M. Rogers², Kenneth G. Odde¹

¹Kansas State University, ²Grassy Ridge Consulting

3:00 p.m. 198 **Sale price of Holstein feeder steer lots relative to other breed descriptions sold through Superior Livestock video sales from 2010 through 2018**

Esther D. McCabe¹, Maggie J. Smith¹, Micheal E. King¹, Karol E. Fike¹, Glenn M. Rogers², Kenneth G. Odde¹

¹Kansas State University, ²Grassy Ridge Consulting

3:15 p.m. 201 **Precision of gain estimates for beef cattle with an automated weighing system**

Roberto D. Sainz¹

¹University of California, Davis

3:30 p.m. 202 **Repeatability of Estrus Detection Patch Readings and Relationship with Breeding Success**

Vitor R G. Mercadante ¹, Robin R. White ², Heather L. Bradford ³, Nicholas W. Dias ³, Claire L. Timlin ⁴, Stefania Pancini ³, John Currin ³, Sherrie Clarke ⁵, Jamie L. Stewart ³

¹Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences, ²Virginia Tech School of Animal Sciences, ³Virginia Tech, ⁴Animal and Poultry Sciences, Virginia Tech, ⁵VA-MD College of Veterinary Medicine

3:45 p.m. 462 **Perinatal nutrient availability in beef calves: Causes and consequences**

Allison M. Meyer ¹

¹University of Missouri

Breeding and Genetics Symposium III: Genome Editing: Science and Commercialization

Chair: John Vicini, Bayer CropSciences

2:00 PM - 5:00 PM

Meeting Room 18B

2:00 p.m. **Breeding and Genetics Symposium III Introduction**

2:10 p.m. 231 **Structure and mechanism of CRISPR/Cas9**

David W. Taylor ¹

¹

2:40 p.m. 230 **Genome editing applications in plants: high-throughput CRISPR/Cas editing for crop improvement**

Michael Thomson ¹

¹Texas A&M University

3:10 p.m. **Breeding and Genetics Symposium III Break**

3:30 p.m. 232 **Protecting Pigs from Viral Infectivity with Gene Editing**

Kristin Whitworth ¹, Kevin Wells ¹, Randall S. Prather ²

¹University of Missouri, ²University of Missouri-Columbia

4:00 p.m. 233 **Global regulatory landscape for evaluation of products derived from gene editing**

Clint Nesbitt ¹

¹Biotechnology Innovation Organization

4:30 p.m. 234 **Earning Public Trust in Gene Editing**

Amy te Plate-Church ¹

¹The Center for Food Integrity

**Graduate Symposium: Perspectives of the Non-traditional Animal Scientist
Introduction**

Chair: Bailey Engle, Texas A&M University, Department of Animal Science
2:00 PM - 5:00 PM
Meeting Room 10C

2:00 p.m. **Graduate Symposium: Perspectives of the Non-traditional Animal
Scientist Introduction**

2:05 p.m. 453 **Translating academic knowledge for improved livestock production
in the developing world**

Andy D. Herring¹

¹Texas A&M University

2:40 p.m. 454 **Animal agriculture in an urban space**

Katie Richmond¹

¹

3:15 p.m. **Graduate Symposium: Perspectives of the Non-traditional Animal
Scientist Break**

3:30 p.m. 455 **Multidisciplinary experiences create insight and enhance creativity in
science**

Penny K. Riggs¹

¹Texas A&M University

4:05 p.m. 456 **Harnessing the beef supply chain: Experiences with
entrepreneurship**

Dustin Dean¹

¹

4:40 p.m. 457 **Translating principles of animal nutrition to human medicine**

Teresa A. Davis¹

¹USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine

Companion and Comparative Animal Nutrition Session

Chair: Katie Barry, International Ingredient Corporation

2:00 PM - 5:30 PM

Meeting Room 14

2:00 p.m. **Presentation of Award: Corbin Companion Animal Biology Award**

Bruce Arentson¹

¹Mars Petcare

2:05 p.m. 235 **Awardee Talk - Processing considerations for the pet food industry**

Charles G. Aldrich¹

¹Kansas State University

2:30 p.m. 240 **True Nutrient and Amino Acid Digestibility of Black Soldier Fly Larvae Differing in Life Stage Using the Precision-Fed Cecectomized Rooster Assay**
Sungho Do ¹, Liz Koutsos ², Pamela L Utterback ³, Carl M Parsons ³, Maria R. C. de Godoy ⁴, Kelly S. Swanson ⁵

¹University of Illinois Urbana-Champaign, ²EnviroFlight, ³Department of Animal Science, University of Illinois at Urbana-Champaign, ⁴Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, ⁵University of Illinois at Urbana-Champaign

2:45 p.m. 241 **True Nutrient and Amino Acid Digestibility of Human-Grade Dog Foods Using the Precision-Fed Cecectomized Rooster Assay**

Patricia Massae Oba ¹, Pamela L Utterback ², Carl M Parsons ², Kelly S. Swanson ³

¹University of Illinois Urbana-Champaign, ²Department of Animal Science, University of Illinois at Urbana-Champaign, ³University of Illinois at Urbana-Champaign

3:00 p.m. 239 **Stray and abandoned dog overpopulation management- Israel's unique system**

Liat Morgan ¹, Boris Yakobson ², Tal Raz ³

¹Koret School of Veterinary Medicine, the Hebrew University of Jerusalem, ²Ministry of Agriculture and Rural Development, Israel, ³Koret School of Veterinary Medicine Robert H. Smith Faculty of Agriculture, Food, and Environment, The Hebrew University of Jerusalem

3:15 p.m. 238 **Effects of algae DHA on parameters of nutrient digestibility, blood coagulation and serum fatty acid profile**

Carrie James ¹, Fei He ², Heather Mangian ³, Jolene Hoke ⁴, Gary M. Davenport ⁴, Maria R. C. de Godoy ⁵

¹University of Illinois at Urbana-Champaign, ²University of Illinois at Urbana Champaign, ³Department of Animal Sciences, University of Illinois at Urbana-Champaign, ⁴Archer Daniels Midland Company, ⁵Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

3:30 p.m. **Companion and Comparative Animal Nutrition Break**

3:45 p.m. 237 **Evaluation of cooked and raw garbanzo beans as main plant protein sources in extruded feline diets**

Lauren M. Reilly ¹, Fei He ², Heather Mangian ³, Jolene Hoke ⁴, Gary M. Davenport ⁴, Maria R. C. de Godoy ⁵

¹University of Illinois - Urbana/Champaign, ²University of Illinois at Urbana Champaign, ³Department of Animal Sciences, University of Illinois at Urbana-Champaign, ⁴Archer Daniels Midland Company, ⁵Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

4:00 p.m. 244 **White and Red Sorghum as Primary Carbohydrate Sources in Extruded Diets of Felines**

Patrick von Schaumburg ¹, Fei He ², Heather Mangian ³, Jolene Hoke ⁴, Maria R. C. de Godoy ⁵

¹University of Illinois Urbana-Champaign, ²University of Illinois at Urbana Champaign, ³Department of Animal Sciences, University of Illinois at Urbana-Champaign, ⁴Archer Daniels Midland Company, ⁵Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

4:15 p.m. 245 **Effects of dietary macronutrient content on fecal microbiota populations and metabolite concentrations of healthy adult dogs**

Ching-Yen Lin ¹, Meredith Carroll ², Xiaojing Yang ³, Sungho Do ⁴, Wanting Shi ³, Thunyaporn Phungviwatnikul ², Fei He ⁵, Kelly S. Swanson ²

¹Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, ²University of Illinois at Urbana-Champaign, ³Department of Animal Sciences, University of Illinois at Urbana-Champaign, ⁴University of Illinois Urbana-Champaign, ⁵University of Illinois at Urbana Champaign

4:30 p.m. 242 **Effects of different carbohydrate sources on taurine status in healthy Beagle dogs**

Julia Guazzelli Pezzali ¹, Heather L. Acuff ², Celeste Alexander ³, Kelly S. Swanson ³, Charles G. Aldrich ²

¹Department of Grain Science and Industry, Kansas State University, ²Kansas State University, ³University of Illinois at Urbana-Champaign

4:45 p.m. 243 **Digestibility, Fecal Characteristics, and Blood Parameters of Adult Dogs Fed High Fat Diets**

Logan R. Kilburn ¹

¹Iowa State University

5:00 p.m. 246 **Salivary electrolyte turnover in mid-distance trained sled dogs during 12 weeks of incremental conditioning**

James Templeman ¹, Noelle McCarthy ¹, Michael Lindinger ², Anna-Kate Shoveller ³

¹University of Guelph, ²The Nutraceutical Alliance, ³Department of Animal Biosciences, University of Guelph

5:15 p.m. 236 **Determination of amino acid requirements of lysine and tryptophan of >14 wk old growing Labrador retriever puppies using the indicator amino acid oxidation technique**

Craig N. Coon ¹, Jessica L. Varney ¹, Jason W. Fowler ¹, Jordan T. Weil ¹, Mary Ann Boggess ¹

¹Four Rivers Kennel, LLC

Poster Session VIII

5:00 PM - 6:00 PM

Ballroom D

5:00 p.m. PSVIII-27 **A Weighted Genomic Relationship Matrix Based on FST Prioritized SNPs for Genomic Selection**

Ling-Yun Chang ¹, Sajjad Toghiani ², EL Hamidi Hay ³, Samuel E. Aggrey ⁴, Romdhane Rekaya ⁵

¹ABS Global Inc, ²USDA Agricultural Research Service, ³USDA Agricultural Research Service, Fort Keogh Livestock and Range Research Laboratory, ⁴The University of Georgia, ⁵University of Georgia

5:00 p.m. PSVIII-9 **An aggressive implant program altered USDA yield and quality grade of long-fed Jersey steer carcasses**

Sierra L. Pillmore ¹, Tylo J. Kirkpatrick ², Kimberly B. Cooper ², Travis C. Tennant ¹, Ty E. Lawrence ¹

¹West Texas A&M University, ²Beef Carcass Research Center - West Texas A&M University

5:00 p.m. PSVIII-29 **Analysis of genotype by environment interaction across time for Nile tilapia reared in different production systems**

Arthur Fernandes ¹, Erika R. de Alvarenga ², Gabriel F. O. Alves ², Ludson G. Manduca ², Fabio L. B. Toral ², Bruno Valente ³, Martinho A. Silva ², Eduardo M. Turra ²

¹Cobb-Vantress, ²UFMG, ³Genus PIC

5:00 p.m. PSVIII-13 **Assessment of broiler chickens meat productivity**

Alexander Aristov ¹, Kirill Plemyashov ², Vera Bolgova ³, Konstantin Lobodin ⁴, Lidiya Esaulova ³

¹Voronezh State Agrarian University after Emperor Peter I, ²Saint Petersburg State University of Veterinary Medicine, ³Voronezh State Agricultural University after Emperor Peter the Great, ⁴Voronezh State Agrarian University named after Emperor Peter the Great

5:00 p.m. PSVIII-21 **Bivariate Genomic Prediction with Different Heritability, QTL and SNP Panel Scenarios using Artificial Neural Network**

Sunday O. Peters ¹, Mahmut Sinecen ², Kadir Kizilkaya ²

¹Department of Animal Science, Berry College, ²Aydin Adnan Menderes University, AYDIN

5:00 p.m. PSVIII-12 **Comparative Characterization of Intestinal Alkaline Phosphatase Kinetics in Young Piglets and Human Caco-2 Cells**

Nicole Burello ¹, Hua Zhang ², Weijun Wang ¹, Tania L. Archbold ¹, Rong Tsao ², Ming Z. Fan ³

¹University of Guelph, ²Guelph Research and Development Centre, Agriculture and Agri-Food Canada, ³Department of Animal Biosciences, University of Guelph

5:00 p.m. PSVIII-5 **Determination of True Digestibility and the Endogenous Outputs of Magnesium in Corn for Growing Pigs by Using the Regression Analysis Technique**
Hongzhi Wu ¹, Xindi Yin ², Zeyu Yang ², Tania L. Archbold ², Wenyi Fan ², Weijun Wang ², Li Xu ³

¹College of Animal Sciences and Technology, Northeast Agricultural University; and
Department of Animal Biosciences, University of Guelph, ²University of Guelph, ³Northeast
Agricultural University

5:00 p.m. PSVIII-18 **Dietary Supplementation with Trihexanoin Enhances Intestinal Function of Weaned Piglets**

Tao Wu ¹

¹Wuhan polytechnic University

5:00 p.m. PSVIII-40 **Effect of prenatal transportation stress on DNA methylation in Brahman heifers**

Emilie C. Baker ¹, Kubra Z. Cilkiz ², Penny K. Riggs ², Ronald D. Randel ³, David G. Riley ²

¹West Texas A&M University, ²Texas A&M University, ³Texas A&M AgriLife Research,
Overton, TX

5:00 p.m. PSVIII-42 **Effect of Presynchronization Using Prostaglandin F_{2α} Prior to a Shortened Progesterone Exposure in Fixed-Timed AI of Crossbred Beef Cows Nursing Calves**

W. L. Rook ¹, Jeremy G. Powell ², Reagan N. Cauble ³, Rick W. Rorie ³

¹Department of Animal Science, Division of Agriculture, University of Arkansas System,
Department of Animal Science, Division of Agriculture, University of Arkansas System,
Southwest Research and Extension Center, Hope, AR, ²University of Arkansas System
Division of Agriculture, ³University of Arkansas

5:00 p.m. PSVIII-25 **Effect of rate of weight gain and expected progeny difference (EPD) of the sire on puberty of crossbred heifers (Angus x Nellore) weaned early**

José paulo P. R. Barroso ¹, Gabriela B. Oliveira ², Daniel M. Polizel ², Janaina S S. Biava ¹,
Marcos V C. Ferraz ³, Alexandre A. Miszura ², André S. Martins ², Arnaldo C. Limede ²,
Evandro Maia M. Ferreira ¹, Alexandre Vaz Pires ¹

¹ASAS, ²University of Sao Paulo, ³Federal University of Amazonas

5:00 p.m. PSVIII-16 **Effects of an Aggressive Implant Strategy on Fabrication Yields of Jersey Steers**

Kaitlyn R. Wesley ¹, Tylo J. Kirkpatrick ¹, Sierra L. Pillmore ², Kimberly B. Cooper ¹, Travis C.
Tennant ², Ty E. Lawrence ²

¹Beef Carcass Research Center - West Texas A&M University, ²West Texas A&M University

5:00 p.m. PSVIII-10 **Effects of early intervention by fecal microbiota transplantation combined probiotics on the growth performance, intestinal barrier and immunity function, and gut microbiota in sucking piglets**

Quanhang Xiang ¹, Jian Peng ¹

¹Huazhong Agricultural University

5:00 p.m. PSVIII-8 **Effects of heat stress and arginine on intestinal morphology and hepatic metabolism in finishing pigs**

Li Wang¹, Yunxia Xiong², Hongbo Yi³, Xiaolu Wen¹, Kaiguo Gao², Zongyong Jiang²

¹Institute of Animal Science, Guangdong Academy of Agricultural Sciences, ²Institute of Animal Science, Guangdong Academy of Agricultural Sciences; Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China, ³Ministry of Agriculture Key Laboratory of Animal Nutrition and Feed Science in South China

5:00 p.m. PSVIII-2 **Effects of Metformin on White Adipose Tissue Transdifferentiation**

Sarah Shelby¹, Saeed Ghnaimawi¹, Jinglong Chen², Yan Huang¹

¹University of Arkansas, ²Nanjing Agricultural University

5:00 p.m. PSVIII-32 **Estimates of genetic parameters for sub-primal and meat quality traits in Canadian commercial crossbred swine populations**

Prince P. Opoku¹, Bimol Roy², Graham Plastow¹, Huaigang Lei², Chunyan Zhang¹, Heather L. Bruce², Le Luo L. Guan³

¹Livestock Gentec, Department of Agricultural, Food and Nutritional Science, University of Alberta, ²Department of Agricultural, Food and Nutritional Science, University of Alberta, ³Department of Agriculture, Food and Nutritional Science, University of Alberta, Edmonton, AB T6G 2P5, Canada

5:00 p.m. PSVIII-37 **Estimation of genetic parameters for novel meat quality and carcass traits in Duroc pigs**

Hannah E. Willson¹, Hinayah R. Oliveira², Allan P. Schinckel³, Daniela Grossi⁴

¹Department of Animal Sciences, Purdue University, ²Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, ³Purdue University, ⁴Fast Genetics

5:00 p.m. PSVIII-26 **Gene Editing of Complex Traits**

Ashley S. Ling¹, Romdhane Rekaya²

¹University of Georgia, Department of Animal and Dairy Science, ²University of Georgia

5:00 p.m. PSVIII-14 **GENETIC CHANGE IN QTLs RELATED WITH NUTRITIONAL VALUE OF EGG IN SMALL SCALED CHICKEN POPULATIONS**

Natalia Dementeva¹, Mitrofanova V. Olga¹, Silyukova L. Yulia¹, Stanishevskaya I. Olga¹, Larkina A. Tatyana¹, Fedorova S. Elena¹, Vachrameev B. Anatoliy¹, Dyisin Artem¹, Makarova V. Alexandra¹, Andrei A. Kudinov², Kirill Plemiyashov³

¹Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Science Center for Animal Husbandry, ², ³Saint Petersburg State University of Veterinary Medicine

5:00 p.m. PSVIII-39 **Genome-wide DNA methylation alteration in prenatally stressed Brahman heifer calves with the advancement of age**

Kubra Z. Cilkiz¹, Emilie C. Baker², Penny K. Riggs¹, Ronald D. Randel³, David G. Riley¹, Thomas H. Welsh⁴

¹Texas A&M University, ²West Texas A&M University, ³Texas A&M AgriLife Research, Overton, TX, ⁴Department of Animal Science, Texas A&M University, and Texas A&M AgriLife Research

5:00 p.m. PSVIII-31 **Genome-wide estimation of linkage disequilibrium using American mink genotyping-by-sequencing data**

Karim Karimi ¹, A. Hossain Farid ², Mehdi Sargolzaei ³, Sean Myles ⁴, Younes Miar ⁵
¹Dalhousie University, ²Department of Animal Science and Aquaculture, Dalhousie University, ³Department of Pathobiology, University of Guelph, ⁴Department of Plant, Food, and Environmental Sciences, Dalhousie University, ⁵1 Department of Animal Science and Aquaculture, Dalhousie University

5:00 p.m. PSVIII-38 **Genomic prediction for tick resistance in Angus cattle**

Gabriel Campos ¹, Fernando F. Cardoso ², Claudia Cristina Gulias-Gomes ³, Robert Domingues ², Luciana Regitano ⁴, Marcia Sena de Oliveira ⁴, Henrique Nunes de Oliveira ⁵, Roberto Carneiro ⁵, Lucia Galvão Albuquerque ⁶, Daniela Lourenco ⁷
¹University Of Georgia, ²Embrapa Pecuária Sul, ³Embrapa South Livestock, Bagé, Brazil, ⁴Embrapa Pecuária Sudeste, ⁵Universidade Estadual Paulista "Júlio de Mesquita Filho", ⁶Department of Animal Science, School of Agricultural and Veterinarian Sciences, São Paulo State University (Unesp) - Jaboticabal - SP. Brazil; National Council for Science and Technological Development, Brasília, DF, Brazil, ⁷University of Georgia

5:00 p.m. PSVIII-23 **High-density SNP marker based genetic diversity and population structure study of reindeer populations**

Veronika Ruslanovna Kharzinova ¹, Arsen Vladimirovich Dotsev ¹, Anastasiya D. Solovieva ², Klaus Wimmers ³, Henry Reyer ³, Gottfried Brem ⁴, Natalia Anatolievna Zinovieva ¹
¹L.K. Ernst Federal Research Center for Animal Husbandry, ²L.K. Ernst Federal Science Center for Animal Husbandry, ³Institute of Genome Biology, Research Institute for Farm Animal Biology (FBN), ⁴Institute of Animal Breeding and Genetics, University of Veterinary Medicine [VMU],

5:00 p.m. PSVIII-34 **Identification of copy number variants in Curraleiro Pé Duro breed.**

Adriana S. Carmo ¹, Gabriel Santos ¹, Ana Lúcia Teixeira ¹, Marcelo Silva ², Maria Ivete Moura ³, Arthur Mascioli ¹, Maria Clorinda Fioravanti ¹
¹UFG - Universidade Federal de Goiás, ²UFGD - Universidade Federal de Grande Dourados, ³PUC - Pontificia Universidade Católica de Goiás

5:00 p.m. PSVIII-17 **In vitro and in vivo investigations of effects of natural phytogetic compounds on muscle cell gene expressions and growth performance and carcass composition of finishing pigs**

Y-J Kim ¹, J-H Kim ¹, J-W Kim ¹, S-H Kim ¹, J.-S. Eun ¹, S-M Hong ¹
¹Institute of Integrated Technology, CJ CheilJedang BIO

5:00 p.m. PSVIII-7 **In vitro fermentation of different dietary fibers selectively changed sow gut microbiota composition**

Xiong Xia ¹, Lingling Hu ², Jian Peng ²
¹Department of Animal Nutrition and Feed Science, College of Animal Science and Technology, Huazhong Agricultural University, ²Huazhong Agricultural University

5:00 p.m. PSVIII-24 **Inbreeding levels of the Line 4 Hereford cattle population**

Jordan K. Hieber¹, Jennifer M. Thomson¹

¹Department of Animal and Range Sciences, Montana State University

5:00 p.m. PSVIII-4 **Live growth performance of Jersey steers using an aggressive implant strategy**

Tylo J. Kirkpatrick¹, Sierra L. Pillmore², Kimberly B. Cooper¹, Travis C. Tennant², Ty E. Lawrence²

¹Beef Carcass Research Center - West Texas A&M University, ²West Texas A&M University

5:00 p.m. PSVIII-3 **Maternal Nutrient Restriction During Mid-to-Late Gestation Alters Adipogenic Gene Expression in Subcutaneous and Perirenal Adipose Tissue of Fetal Beef Cattle Offspring**

Dana S. Reid¹, Lauren Ellison², Kalisha Yankey², Caleb O. Lemley³, Derris D. Burnett⁴

¹Department of Animal and Dairy Sciences, Mississippi State University, ²Animal and Dairy Sciences, Mississippi State University, ³Mississippi State University, ⁴PhD

5:00 p.m. PSVIII-19 **Meta-analysis of genetic parameter estimates for feed efficiency traits in dairy cattle**

Hinayah R. Oliveira¹, Flavio S. Schenkel², Caeli M.R. Richardson³, Filippo Miglior⁴, Luiz F. Brito⁵

¹Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, ²Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, 50 Stone Rd E, N1G 1Y2, ON, Canada, ³La Trobe University, ⁴Centre for Genetic Improvement of Livestock, University of Guelph, Ontario, Canada & Lactanet, Genetics Division, Guelph, Canada, ⁵Purdue University

5:00 p.m. PSVIII-22 **Microsatellite-based heterozygosity fitness correlations in reindeer**

Arsen Vladimirovich Dotsev¹, Veronika Ruslanovna Kharzinova¹, Tatiana M. Romanenko², Gottfried Brem³, Elena Nikitkina⁴, Natalia Anatolievna Zinovieva¹

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²FCIARctic Nenets Division — Agro-Experimental Station, Federal Agency of Scientific Organizations, ³Institute of Animal Breeding and Genetics, University of Veterinary Medicine [VMU], ⁴Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Research Center for Animal Husbandry

5:00 p.m. PSVIII-1 **Nutrient starvation induces autophagy and alters intestinal barrier function in IPEC-J2 cells**

Enkai Li¹, Hang Lu¹, Kolapo M. Ajuwon¹

¹Purdue University

5:00 p.m. PSVIII-15 **Polymorphism of dysferline gene in chickens**

Anna Krutikova¹, Kirill Plemyashov², Natalia Dementeva³

¹Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Research Center for Animal Husbandry, ²Saint Petersburg State University of Veterinary Medicine, ³Russian Research Institute of Farm Animal Genetics and Breeding — Branch of the L.K. Ernst Federal Science Center for Animal Husbandry

5:00 p.m. PSVIII-36 **POLYMORPHISMS AT THE 5' REGION FLANKING THE OVINE IGF-1 GENE AFFECT mRNA LEVELS IN DORPER LAMBS**

Luis Angel Flores Encinas ¹, José A. Martínez-Quintana ², Felipe A. Rodríguez-Almeida ², MONSERRATH FELIX-PORTILLO ², Francisco J. Jahuey-Martínez ³

¹UNIVERSIDAD AUTÓNOMA DE CHIHUAHUA, ²Universidad Autónoma de Chihuahua,

³Universidad Autónoma de Chihuahua, Facultad de Zootecnia y Ecología

5:00 p.m. PSVIII-30 **Relationship of molecular breeding value for beef tenderness on heifer traits through weaning their first calf**

Gary L. Bennett ¹, Robert Cushman ², Anthony K. McNeel ¹, Eduardo Casas ³, Timothy P. Smith ¹

¹USDA, Agricultural Research Service, US Meat Animal Research Center, ²USDA, ARS, U.S. Meat Animal Research Center, ³USDA, Agricultural Research Service, National Animal Disease Center

5:00 p.m. PSVIII-41 **Study of functional variants in homozygous islands in Nelore cattle**

Ana Fabricia Braga Magalhães ¹, Maria Eugenia Z. Mercadante ², Danielly Beraldo dos Santos Silva ³, Gerardo Alves Fernandes Júnior ⁴, Ana Cristina Herrera Rios ⁴, Lúcio Flávio Macedo Mota ⁴, Lucia Galvão Albuquerque ⁵

¹APTA Beef Cattle Center, Animal Science Institute, Sertãozinho, São Paulo, Brazil,

²Institute of Animal Science, ³São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, SP, Brazil., ⁴Department of Animal Science, School of Agricultural and Veterinarian Sciences, São Paulo State University (Unesp). Jaboticabal - SP. Brazil, ⁵Department of Animal Science, School of Agricultural and Veterinarian Sciences,

São Paulo State University (Unesp) - Jaboticabal - SP. Brazil; National Council for Science and Technological Development, Brasilia, DF, Brazil

5:00 p.m. PSVIII-28 **The effect of adaptogen on the growth and development of dairy calves**

Irina Lunegova ¹

¹Federal State Budgetary Institution of Higher Education "St. Petersburg State Academy of Veterinary Medicine"

5:00 p.m. PSVIII-35 **The impact of daughter pregnancy rate on the reproductive efficiency of Brazilian dairy herds**

Adriana S. Carmo ¹, Marcello Santos ¹, Larissa Braga ¹, Arthur Mascioli ¹

¹UFG - Universidade Federal de Goiás

5:00 p.m. PSVIII-6 **The Small Intestinal Responses in the Determination of True Digestibility and the Endogenous Outputs of Phosphorus in Corn for Growing Pig Using the Regression Analysis Technique**

Hongzhi Wu ¹, Zeyu Yang ², Xindi Yin ², Tania L. Archbold ², Wenyi Fan ², Li Xu ³

¹College of Animal Sciences and Technology, Northeast Agricultural University; and Department of Animal Biosciences, University of Guelph, ²University of Guelph, ³Northeast Agricultural University

5:00 p.m. PSVIII-33 **Therapeutic Effects of Sophorolipid on Intestinal Restoration in HT-29 cell and Early-weaned Rats**

Minjin Kwak¹, Jonggun Kim¹, Hanbae Lee², Kwang-Youn Whang¹
¹Korea University, ²Pathway Intermediates

5:00 p.m. PSVIII-11 **Transcriptome profiling of bovine satellite cell differentiation in Hanwoo longissimus dorsi and semimembranosus muscle**

Ki Yong Chung¹, Eun Mi Lee², Eung Gi Kwon³, Man Hi Han², Sara Heras-Saldana⁴, Cedric Gondro⁴

¹Korea National College of Agriculture and Fisheries, ²National Institute of Animal Science, ³Hanwoo Research Institute, ⁴Michigan State University

5:00 p.m. PSVIII-20 **Univariate Genomic Prediction with Different Heritability, QTL and SNP Panel Scenarios using Artificial Neural Network**

Sunday O. Peters¹, Mahmut Sinecen², Kadir Kizilkaya²

¹Department of Animal Science, Berry College, ²Aydin Adnan Menderes University, AYDIN

ASAS National and Sectional Graduate Director Meeting

5:30 PM - 6:30 PM
Meeting Room 12A

Poster Session IX

6:30 PM - 7:30 PM
Ballroom D

6:30 p.m. PSIX-7 **¹H NMR-based plasma metabolomics reveals a potential biomarker of aflatoxin ingestion in dairy cows**

Ibukun M. Ogunade¹, Yun Jiang²

¹Kentucky State University, ²Department of Animal Sciences, University of Florida

6:30 p.m. PSIX-32 **Alterations in caprine ruminal microorganism fermentation over time using camphor in vitro**

Darren S. Seidel¹, Travis R. Whitney², John W. Walker³, Todd R. Callaway⁴

¹The University of Georgia, ²Texas A&M AgriLife Research, ³Texas A&M AgriLife, ⁴University of Georgia

6:30 p.m. PSIX-35 **Alternatives to antibiotic supplementation on broiler performance under highland conditions.**

Rodolfo Riboty¹, Christian H. Ponce²

¹Integracion Avicola Oro, ²Universidad San Francisco de Quito

6:30 p.m. PSIX-1 **Associative effect of wet-distillers' grains plus solubles and tannin-rich peanut skin supplementation on in vitro rumen fermentation, greenhouse gas emissions, and microbiome changes**

byeng ryel min¹, Lana Castleberry², David Parker¹, Heidi Waldrip¹, David Brauer¹, Heather Allen¹

¹PH.D., ²Scientist

6:30 p.m. PSIX-42 **Comparasion of Cactus (*Opuntia ficus-indica*) digestion kinetics with Alfafa (*Medicago sativa*) and Orchard (*Dactylis glomerata*) hays**

Karin van den Broek¹, Arturo Macias Franco², Aghata Silva³, Felipe Henrique De Moura⁴, Mozart A. Fonseca⁵

¹Master's student, ²University of Nevada Reno, ³Auburn University, ⁴University of Nevada, Reno, ⁵Assistant Professor Beef Cattle Production& Applied Modeling

6:30 p.m. PSIX-9 **Dietary β -sitosterol improves immunity and antioxidant status in broilers**

Yefei Cheng¹, Yueping Chen¹, Chao Wen¹, Yanmin Zhou¹

¹Nanjing Agricultural University

6:30 p.m. PSIX-17 **Effect of imprinting with essential oils on performance parameters and diarrheas in weaned piglets**

Bernat Canal¹, Monica Puyalto², Luis Mesas¹, Cinta Sol¹, Rhuan F. Chaves³, Vinicius Cantarelli⁴, Juan Jose Mallo²

¹Norel SA, ²Norel S.A., ³Universidade Federal de Lavras, ⁴DZO/UFLA

6:30 p.m. PSIX-36 **Effect of lauric acid based additives on piglets fecal microbiota**

Cinta Sol¹, Monica Puyalto², Mario Lindenbeck¹, Juan Jose Mallo², Jürgen Zentek³

¹Norel SA, ²Norel S.A., ³Freie Universität Berlin, Berlin, Germany, 14195

6:30 p.m. PSIX-29 **Effect of Quebracho (*Schinopsis balansae*) extract inclusion in a high roughage diet upon in situ digestion.**

Luiz Fernando Dias Batista¹, Aaron B. Norris², Madeline E. Rivera³, Genevieve M. D'Souza¹, Jordan Adams¹, Luis O. Tedeschi¹

¹Texas A&M University, ²Texas Tech University, ³Texas A&M university

6:30 p.m. PSIX-21 **Effect of reduced digestible protein and amino acid supply imposed in the grower and finisher period or solely in the finisher period on growth performance and feeding behaviour**

Giuseppe Bee¹, Guy Maikoff¹

¹Agroscope

6:30 p.m. PSIX-26 **Effect of supplemental Arg on respiration rate and body temperature of pigs exposed to heat stress**

Adriana Morales Trejo¹, Fernanda González², Hugo Bernal³, Miguel Cervantes-Ramírez⁴, Caroline González-Vega⁵, John K. Khun Kyaw Htoo⁶

¹UABC, ²Universidad Autónoma de Nuevo León, ³UANL, ⁴Universidad Autónoma de Baja California, ⁵Evonik Operations GmbH, ⁶Evonik

6:30 p.m. PSIX-6 **Effects of a live yeast product on ruminal bacterial diversity and metabolome of beef cattle**

Ibukun M. Ogunade¹, Jerusha Lay¹, Kenneth Andries¹, Fredrick Bebe¹

¹Kentucky State University

6:30 p.m. PSIX-22 **Effects of betaine supplementation on growth performance, muscle amino acid contents, meat quality and antioxidant capacity in finishing pigs**

Rui Chen ¹, Chao Wen ¹, Yueping Chen ¹, Su Zhuang ¹, Yanmin Zhou ¹

¹Nanjing Agricultural University

6:30 p.m. PSIX-34 **Effects of corn protein concentrate level in the diets of the weanling piglet on performance, Nitrogen balance, visceral organ mass and blood parameters**

Jose Alvear ¹, Jorge Ron ¹, Hector Torrealba ², Christian H. Ponce ³

¹Universidad de las Fuerzas Armadas-ESPE, ²Nutrientes e Insumos para Animales, Nutrina, Cía. Ltda., ³Universidad San Francisco de Quito

6:30 p.m. PSIX-33 **Effects of corn protein concentrate levels on egg production and egg quality parameters of commercial layers.**

Alfredo Herrera ¹, Mario Ortiz ¹, Hector Torrealba ², Christian H. Ponce ³

¹Universidad de las Fuerzas Armadas-ESPE, ²Nutrientes e Insumos para Animales, Nutrina, Cía. Ltda., ³Universidad San Francisco de Quito

6:30 p.m. PSIX-16 **Effects of dietary cadmium on production performance, hepatic injury and tissue residue in laying hens**

Bei-Yu Zhang ¹, Can Tao ¹, Xiao-Tian Wei ¹, Ni-Ya Zhang ¹

¹Huazhong Agricultural University

6:30 p.m. PSIX-28 **Effects of dietary flavor in experimental and commercial nursery diets on growth performance of weaned pigs**

Soyun Kim ¹, Jeongjae Lee ², Sheena Kim ², Byeonghyeon Kim ², Joowon Kang ², Daye Mun ², Jangryeol Baek ², Hyunjin Kyoung ², Jeehwan Choe ³, Dongoh Seo ², Alex Hung ⁴, Jongmoon Lee ⁵, Minh Song ²

¹Chungnam National University, ²Chungnam National University, ³Korea National College of Agriculture and Fisheries, ⁴Lucta flavours Co. Ltd, ⁵CTCbio Inc.

6:30 p.m. PSIX-30 **Effects of dietary lysine restriction on plasma amino acid profile and growth performance of growing pigs**

Shamimul Hasan ¹, Rebecca Humphrey ², Shengfa T. Liao ²

¹Department of Animal & Dairy Sciences, Mississippi State University, USA, ²Mississippi State University

6:30 p.m. PSIX-5 **Effects of live yeast on functional attributes of rumen microbiota in beef cattle**

Ibukun M. Ogunade ¹, Jerusha Lay ¹, Kenneth Andries ¹

¹Kentucky State University

6:30 p.m. PSIX-15 **Effects of mixture of essential oils and organic acid supplementation on growth performance, blood profiles, leg bone length and intestinal morphology in broilers**

Hanjin Oh ¹, Shudong Liu ², Won Yun ², Jihwan Lee ², Jiseon An ², Seungyeol Cho ³, Jinho Cho ¹

¹Department of Animal Science, Chungbuk National University, ²Division of Food and Animal Science, Chungbuk National University, ³Eugenbio

6:30 p.m. PSIX-24 **Effects of rice feeding on growth performance and protein (amino acids) metabolism in weaning piglets**

Ryozo Takada ¹, Yuusuke Tasaka ²

¹ASJS, ²JSSS

6:30 p.m. PSIX-14 **Effects of substituting dietary corn with beet pulp on growth performance and microbial profiles in the rumen of Korean cattle steers**

Inhyuk Jeong ¹, Hyeok Joong Kang ², Seung Ju Park ³, Beak Seok-Hyeon ³, Dajinsol Jung ², Jinoh Lee ², DoHyun Kim ², HyunJin Kim ², Myunggi Baik ²

¹Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Sciences, Seoul National University, ²Seoul National University, ³Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University

6:30 p.m. PSIX-19 **Effects of ValiMP® Supplementation on Growth Performance, Carcass Characteristics, and Pork Quality in Growing-finishing Pigs**

Min Young Park ¹, Sun-woo Choi ², Jonggun Kim ¹, Minjin Kwak ¹, Kwang-Youn Whang ¹

¹Korea University, ²CTCBIO Inc.

6:30 p.m. PSIX-37 **Evaluation of reducing dietary crude protein concentrations coupled with increasing essential amino acids on growth performance in fattening pigs**

S-M Hong ¹, D Jung ¹, Sun Jong You ²

¹Institute of Integrated Technology, CJ CheilJedang BIO, ²CJ Feed & Care

6:30 p.m. PSIX-8 **Evaluation of Siam weed (*Chromolaena odorata*) leaves as a modifier of rumen fermentation in West African dwarf Bucks**

Adebayo O. Oni ¹, Bobby-Joe Ogadu ¹, Azeez O. Yusuf ¹, A Adebowale ¹, Oluwakemi Oni ¹, Olusiji Sowande ¹, Chryss F. Onwuka ¹

¹Federal University of Agriculture, Abeokuta, Nigeria

6:30 p.m. PSIX-40 **Exogenous carbohydrases improve carcass characteristics of Nellore beef cattle grazed in tropical conditions**

Guilherme S. Vasconcellos ¹, Alexandre Perdigão ², Tiago S. Acedo ³, Victor Valério de Carvalho ⁴, Luis Fernando Tamassia ³

¹DSM Nutritional Products, ²DSM Nutritional Products Brazil, ³DSM Produtos Nutricionais Brasil S.A., ⁴dsm-firmenich

6:30 p.m. PSIX-3 **Fast-growing and slow-growing broiler breeds had different response to feed energy level**

Qiujuan Sun ¹, xiaomin li ², Rong xiang ², Guojun Wang ², wenbin li ², heping hui ², zhiqiang wang ²

¹Beijing Huadu Yukou Poultry Industry Co., Ltd., ²Beijing Huadu Yukou Poultry Industry Co., Ltd.

6:30 p.m. PSIX-11 **Impact of a phytogetic feed additive on growth performance, feed intake and carcass traits of finishing steers**

Tassilo Brand¹, Martin Hünerberg², Tim A. McAllister³, Atef Saleem⁴, YiZhao Shen⁵, Bryan Miller⁶, Wenzhu Yang³

¹Agriculture and Agri-Food Canada; Lethbridge Research and Development Centre, ²Department of Animal Sciences, University of Göttingen, ³Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ⁴South Valley University, ⁵Hebei Agricultural University, ⁶BIOMIN America Inc.

6:30 p.m. PSIX-23 **Inclusion of cocoa husks in the diet for fattening pigs on lipid composition of backfat and muscle**

Damiano Magistrelli¹, Vincenzo D'Ardes¹, Fabia Rosi¹

¹University of Milano

6:30 p.m. PSIX-13 **Influence of herbage allowance and beef cow genotype on herbage intake during mid-gestation in Campos grassland**

Martin Do Carmo¹, Cristina Genro², Andres Cibils³, Pablo Soca⁴

¹American Society of Animal Science, ²Empresa Brasileira de Pesquisa Agropecuária., ³Department of Animal Science, New Mexico State University, ⁴Facultad de Agronomía, Universidad de la República

6:30 p.m. PSIX-38 **Influence of Quebracho (Schinopsis balansae) Tannin Extract Fed at Differing Rates in a High-Roughage Diet on Energy Partitioning in Beef Steers**

Aaron B. Norris¹, Whitney L. Crossland¹, Luis O. Tedeschi², Jamie L. Foster³, James P. Muir⁴, William Pinchak⁵

¹Texas Tech University, ²Texas A&M University, ³Texas A&M AgriLife Research, ⁴TAMU, ⁵Texas A&M AgriLife Research, Vernon

6:30 p.m. PSIX-4 **Metatranscriptomic analysis of sub-acute ruminal acidosis in beef cattle**

Ibukun M. Ogunade¹, Andres Pech Cervantes²

¹Kentucky State University, ²University of Florida

6:30 p.m. PSIX-27 **Moo-vie Snacks: Storage stability and nutritive value of waste popcorn as a feedstock**

Lauren P. Bielamowicz¹, James P. Muir², William B. Smith¹

¹Tarleton State University, ²TAMU

6:30 p.m. PSIX-20 **Performance of nursery pigs fed zinc, copper, manganese, and iron in inorganic or organic forms**

Jack E. Garrett¹, James L. McNaughton²

¹QualiTech, ²AHPharma

6:30 p.m. PSIX-25 **Porcine epidemic diarrhea virus infection impairs intestinal nutrient transport in piglets**

Yongqing Hou¹, Junmei Zhang¹, Dan Yi¹, Tao Wu²

¹Wuhan Polytechnic University, ²Wuhan polytechnic University

6:30 p.m. PSIX-2 **Potential role of rumen microbiota in altering average daily gain and feed efficiency in meat goats fed simple and mixed pastures using bacterial tag-encoded FLX amplicon pyrosequencing**

byeng ryel min ¹, Nar K. Gurung ², Raymond Shange ¹, sandra solaiman ¹

¹PH.D., ²Department of Agricultural and Environmental Sciences, College of Agriculture, Environment, and Nutrition Sciences, Tuskegee University, Tuskegee, AL 36088, USA

6:30 p.m. PSIX-12 **Screening of peptides for their impact of protease, protease dose and peptide dose on in vitro rumen dry matter digestibility**

Wenzhu Yang ¹, YiZhao Shen ², Ranithri Abeynayakea ³, Tao Ran ⁴, Lingyun Chen ⁵

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Hebei Agricultural University, ³University of Alberta, ⁴AAFC, Lethbridge Research and Development Centre, ⁵Department of Agricultural, Food and Nutritional Science, University of Alberta

6:30 p.m. PSIX-39 **Supplementing an immunomodulatory feed ingredient to improve thermoregulation and performance in finishing beef cattle under heat stress conditions**

Eduardo Colombo ¹, Reinaldo F. Cooke ¹, Kelsey Schubach ¹, Bruna Rett ¹, Alice P. Brandão ¹

¹Texas A&M University

6:30 p.m. PSIX-31 **The mineral profile of GuarPro F-81, a potential protein source for swine and other livestock in the United States**

Shengfa T. Liao ¹, Rebecca Humphrey ¹, James Brett ¹, Brian Rude ¹

¹Mississippi State University

6:30 p.m. PSIX-41 **The potential for different supplement sources to reduce frothy legume bloat based on in vitro degradation characteristics**

Ronald J. Trotta ¹, Kendall C. Swanson ²

¹University of Kentucky, ²North Dakota State University

6:30 p.m. PSIX-10 **The replacement of corn by soybean molasses improves ruminal environment of feedlot sheep**

Sérgio A. G. Pereira-Junior ¹, Juliana A. Torrecilhas ², Edivilson S. Castro-Filho ¹, Rayanne Viana. Costa ³, João Pedro A. Bertoco ¹, Andresa L. Feliciano ¹, Júlia L. Rodrigues ¹, Rosemary L. Galati ⁴, Eric H.C.B. van Cleef ⁵, Jane M. B. Ezequiel ¹

¹Sao Paulo State University, ²São Paulo State University (Unesp), School of Agricultural and Veterinarian Sciences, Jaboticabal, ³SÃO PAULO STATE UNIVERSITY, ⁴Federal University of Mato Grosso, ⁵Federal University of Triangulo Mineiro

Poster Session X
7:30 PM - 8:30 PM
Ballroom D

7:30 p.m. PSX-16 **Appetitive And Consummatory Sexual Behavior Of Dorper Rams Of High Or Low Social Hierarchy**

Viridiana Contreras-Villarreal ¹, Andrea González-Tavizón ², Cesar Meza-Herrera ³, Julieta Ordoñez-Morales ¹

¹Universidad Autonoma Agraria Antonio Narro, ²Universidad Autónoma Agraria Antonio Narro, ³URUZA-UACH

7:30 p.m. PSX-39 **Burning for Redcedar Control in Oklahoma**

Raquel V. Lourencon ¹, Steve P. Hart ², Terry A. Gipson ³

¹American Institute for Goat Research, Langston University, ²Langston University, ³Langston

7:30 p.m. PSX-42 **Characterization of the effects of high selenium feed on spermatogenesis in rams**

T. Zane Davis ¹, Bryan Stegelmeier ²

¹USDA-ARS-Poisonous Plant Research Lab, ²USDA-ARS-Poisonous Plant Research

7:30 p.m. PSX-12 **Comparison of Transcervical and Intracervical Artificial Insemination Techniques for Fixed-Time Artificial Insemination (FTAI) in the Goat.**

William B. Foxworth ¹, Scott Horner ¹, Alphina Ho-Watson ², Islyn Gilmore ², Katherine Gutierrez ², Shaye Lewis ², Gary Newton ²

¹Prairie View A&M University International Goat Research Center, ²Prairie View A&M University

7:30 p.m. PSX-13 **Correlation between superficial body temperatures measured with an infrared thermometer in alpacas**

Jorge L. Vilela ¹, Jorge Ascue ², Milagros Callan ², Gianella Goycochea ¹, Andrea Jauregui ¹, Almendra Miranda ², Pamela Montalvo ¹, Alisson Serna ¹, Aranza Sandoval ¹, Enrique Solis ¹, Frank Veramendi ¹

¹Universidad Científica del Sur, ²Universidad Científica del Sur

7:30 p.m. PSX-21 **Diet and Preslaughter Stress Effects on Gut Microbial Populations and Meat Quality Characteristics in Goats**

Phaneendra Batchu ¹, Tony Hazard ¹, Chelsea Pulsifer ², Thomas H. Terrill ¹, Brou Kouakou ¹, Jung H. Lee ¹, Govind Kannan ¹

¹Fort Valley State University, ²Fort Valley

7:30 p.m. PSX-18 **EFFECT OF A FEED COMPLEMENTATION WITH Cucumis melo UPON OVULATORY, EMBRYONARY AND PREGNANCY RATES IN GRAZING GOATS OF NORTHERN MEXICO**

Jesus Mendoza-Carreola ¹, Juan M. Guillén-Muñoz ¹

¹UNIVERSIDAD AUTÓNOMA AGRARIA ANTONIO NARRO

7:30 p.m. PSX-24 **Effect of alkali treated palm kernel meal on nutrient digestibility, blood parameters, performance and carcass characteristics by lambs.**

Jazmin H. Herrera ¹, Stefano Velasco ¹, Diego Vela ¹, Javier Garrido ², Christian H. Ponce ²
¹Universidad de las Fuerzas Armadas-ESPE, ²Universidad San Francisco de Quito

7:30 p.m. PSX-23 **Effect of Feeding 'Serala' Sericea Lespedeza Hay on Indicators of Gastrointestinal Parasitism in Goats.**

Tony Hazard ¹, Niki C. Whitley ¹, Phaneendra Batchu ¹, Chelsea Pulsifer ², Brou Kouakou ¹, Thomas H. Terrill ¹

¹Fort Valley State University, ²Fort Valley

7:30 p.m. PSX-37 **Effect of forage neutral detergent fiber level for feedlot lambs: Digestibility**

Josue Godinez ¹, Francisco Castrejón-Pineda ², alejandro Plascencia ³, Águeda García-Pérez ⁴, Luis Corona ⁵

¹Programa de Posgrado_MCP SA-UNAM, ²Universidad Nacional Autónoma de México.FMVZ, ³Autonomous University Of Baja California, ⁴FMVZ, UNAM, ⁵Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.

7:30 p.m. PSX-36 **Effect of forage neutral digestion fiber level for feedlot lambs: growth performance**

Josue Godinez ¹, alejandro Plascencia ², Francisco Castrejón-Pineda ³, Juan Carlos Ramírez-Orejuel ⁴, Luis Corona ⁵

¹Programa de Posgrado_MCP SA-UNAM, ²Autonomous University Of Baja California, ³Universidad Nacional Autónoma de México.FMVZ, ⁴Universidad Nacional Autónoma de México-FMVZ, ⁵Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.

7:30 p.m. PSX-20 **Effect of nutritional supplementation upon colostrum quality in goats under rangeland conditions in Northern México.**

MA ANGELES DE SANTIAGO ¹, Juan M. Guillén-Muñoz ², Francisco G. Véliz-Deras ³, Viridiana Contreras-Villarreal ⁴, Leonardo I. Vélez-Monroy ⁵, MARIA G. MACHADO ¹

¹UAAAN, ²UNIVERSIDAD AUTÓNOMA AGRARIA ANTONIO NARRO, ³Universidad Autónoma Agraria Antonio Narro, ⁴Universidad Autónoma Agraria Antonio Narro, ⁵INSTITUTO NACIONAL DE INVESTIGACIONES FORESTALES, AGRÍCOLAS Y PECUARIAS

7:30 p.m. PSX-41 **Effect of Polyinosinic-polycytidylic acid on gene expression in goat blood**

Kingsley Ekwemalor ¹, Mulumebet Worku ²

¹North carolina Agricultural and Technical state university, ²NC A&T State University

7:30 p.m. PSX-33 **Effect of supplementing different proportions of sericea lespedeza with alfalfa silage on intake, digestibility, and nitrogen balance in sheep**

Valens Niyigena ¹, Ken P. Coffey ², W. K. Coblenz ³, D Philipp ¹, M. C. Savin ¹, J. Diaz ¹, S.P Park ¹, S.L Shelby ¹

¹University of Arkansas Division of Agriculture, ²University of Arkansas, ³USDA-ARS Dairy Forage Research Center

7:30 p.m. **PSX-8 Effects of hair sheep breed and region of origin on feed dry matter required for maintenance without and with a marked feed restriction**

Dereje Tadesse ¹, Ryszard Puchala ², Arthur L. Goetsch ²

¹American Institute for Goat Research Langston University; College of Agriculture, Debre Berhan University, Debre Berhan, Ethiopia, ²Langston University

7:30 p.m. **PSX-11 Effects of lamb's breed and energy concentration of diet on nutrient digestibility and growth performance**

Anderson Pereira ¹, Hyane Lima ¹, Leonardo M. Freitas ², Henrique Parente ¹, Antônio Lima ¹, Lavínia Xavier ¹, Anderson Zanine ¹, Luana dos Anjos ¹, Grazielle Oliveira ¹, Danrley Bandeira ¹, Karlyene Rocha ¹, Miguel A. Moreira Filho ¹, Michelle Parente ¹

¹Universidade Federal do Maranhão, ²Federal University of Maranhão

7:30 p.m. **PSX-27 Effects of narasin supplementation frequency on lamb ruminal fermentation**

Gabriela B. Oliveira ¹, Daniel M. Polizel ¹, Janaina S S. Biava ², Leticia Pasqualino ¹, Grazielle Oliveira ³, Analisa Bertoloni ¹, José paulo P. R. Barroso ², Marcelo Baggio ¹, Evandro Maia M. Ferreira ², Alexandre Vaz Pires ²

¹University of Sao Paulo, ²ASAS, ³Sao Paulo State University

7:30 p.m. **PSX-40 Effects of nutritional plane before breeding on performance of hair sheep**

Raquel V. Lourencon ¹, Lionel J. Dawson ², Ryszard Puchala ², Luana Ribeiro ¹, Terry A. Gipson ³, Erick Loetz ¹, Miguel Rojas ⁴, Mauricio Calle ⁴, Adaven Scronce ⁵, Arthur L. Goetsch ²

¹American Institute for Goat Research, Langston University, ²Langston University, ³Langston, ⁴American Institute for Goat Research Langston University, ⁵American Institute for Goat Research, Langston University; Ambo University, Ambo, Ethiopia

7:30 p.m. **PSX-31 Effects of substitution of corn and soybean meal with dried distiller's grains and solubles (DDGS) in legume based diets on lamb feed intake, body weight gain and blood metabolites.**

Kianna E. Lyte ¹, Brou Kouakou ¹, Jung H. Lee ¹

¹Fort Valley State University

7:30 p.m. **PSX-22 Evaluation of average fiber diameter measurements by FibreLux micron meter and OFDA2000**

John W. Walker ¹, Ronald Pope ¹, Faron A. Pfeiffer ¹

¹Texas A&M AgriLife

7:30 p.m. **PSX-19 Factors Affecting Growth and Carcass Trait Performance of Canadian Heavy Lambs**

Erin Massender ¹, Luiz F. Brito ², Angela Cánovas ³, Delma Kennedy ⁴, Flavio S. Schenkel ³

¹Centre for Genetic Improvement of Livestock, University of Guelph, Guelph, ON, Canada, ²Purdue University, ³Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, 50 Stone Rd E, N1G 1Y2, ON, Canada, ⁴Ontario Ministry of Agriculture, Food and Rural Affairs, Elora, Ontario, Canada

7:30 p.m. PSX-10 **Feeding behavior and physiologic parameters of goat kids fed by diets with increasing levels of babassu mesocarp flour**

AYLPY Santos¹, Leonardo M. Freitas², Henrique Parente¹, Nitalo MACHADO³, Miguel A. Moreira Filho¹, Maykon Sousa¹, Edegleicia A. Souza¹, Thiago de Cássio F. da Silva¹, Daniele Ferreira¹, Ygor Portela¹, Francisca Sousa¹, Jocélio Araújo¹, Valdi Lima Júnior⁴, Michelle Parente¹

¹Universidade Federal do Maranhão, ²Federal University of Maranhão, ³Universidade Federal do Ceará, ⁴Universidade Federal do Rio Grande do Norte

7:30 p.m. PSX-2 **Growth and lactating performance of ewes fed with different energy levels**

Fernanda F. Santos¹, Luciano Brochine¹, Vanderlei Benetel Junior¹, Maria Laura R. Coelho¹, Augusto H. Hauber Gameiro², Julio C. Balieiro³, Sarita B. Gallo¹, Luis O. Tedeschi⁴

¹University of Sao Paulo, ²School of Veterinary Medicine and Animal Science, University of São Paulo, Pirassununga, SP, Brazil, ³FZEA/USP, ⁴Texas A&M University

7:30 p.m. PSX-15 **Hepatic function characteristics in pregnant Saanen goats depending on month of pregnancy**

Polina D. Bokhan¹, Alesya A. Bakhta², Larisa Y. Karpenko², Anna I. Kozitcyna², Anna B. Balykina², Polina A. Polistovskaia², Abram I. Erukashvili², Polina Anipchenko³

¹St. Petersburg State Academy of Veterinary Medicine, ²Saint-Petersburg State University of Veterinary Medicine, ³St. Petersburg State University of Veterinary Medicine

7:30 p.m. PSX-7 **Induction of sexual behavior of Dorper rams treated with GnRH in northern Mexico**

Francisco G. Véliz-Deras¹, Cesar Meza-Herrera², Oscar Angel³, Leticia R. Gaytan-Alemán¹, MA ANGELES DE SANTIAGO⁴, Evaristo Carrillo⁵, Juan Ramón Luna-Orozco⁶, Elco Humberto García-Bolivar¹

¹Universidad Autónoma Agraria Antonio Narro, ²URUZA-UACH, ³UNIVERSIDAD AUTONOMA AGRARIA ANTONIO NARRO, ⁴UAAAN, ⁵Instituto Tecnológico Torreón, ⁶CBTa #1

7:30 p.m. PSX-17 **INDUCTION OF SEXUAL BEHAVIOR OF DORPER RAMS TREATED WITH hCG IN NORTHERN MEXICO**

Leticia R. Gaytan-Alemán¹, Dalia Carrillo-Moreno¹, Francisco G. Véliz-Deras¹, Gerardo Arellano-Rodríguez², Viridiana Contreras-Villarreal², Julieta Ordoñez-Morales², Jose Luis Herrera-González¹, Rafael Rodríguez-Venegas³

¹Universidad Autónoma Agraria Antonio Narro, ²Universidad Autónoma Agraria Antonio Narro, ³Programa de Doctorado en Ciencias Agropecuarias, Universidad Autónoma Agraria Antonio Narro

7:30 p.m. PSX-30 **Influence of cut, breed type and supplementation on consumer ratings of pasture-raised lamb**

Dahlia O'Brien¹, Stephan Wildeus¹, Theresa Nartea¹, Jung H. Lee²

¹Virginia State University, ²Fort Valley State University

7:30 p.m. PSX-26 **Levels of forage and narasin inclusion on rumen fermentation in feedlot lambs**

Lairana A. Sardinha¹, Daniel M. Polizel¹, Alexandre A. Miszura¹, Arnaldo C. Limede¹, José paulo P. R. Barroso², André S. Martins¹, Gabriela B. Oliveira¹, Evandro Maia M. Ferreira², Nathalia R. Eckermann³, Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS, ³ESALQ/University of São Paulo

7:30 p.m. PSX-29 **Levels of hay and narasin inclusion on carcass characteristics and meat composition**

Lairana A. Sardinha¹, Daniel M. Polizel¹, Alexandre A. Miszura¹, Arnaldo C. Limede¹, José paulo P. R. Barroso², André S. Martins¹, Gabriela B. Oliveira¹, Thamires U. Sturion¹, Evandro Maia M. Ferreira², Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS

7:30 p.m. PSX-28 **Narasin inclusion and different levels of hay change the cecal parameters in feedlot lambs**

Lairana A. Sardinha¹, Daniel M. Polizel¹, Marcelo Baggio¹, Arnaldo C. Limede¹, José paulo P. R. Barroso², André S. Martins¹, Gabriela B. Oliveira¹, Marcos V C. Ferraz³, Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS, ³Federal University of Amazonas

7:30 p.m. PSX-25 **Narasin inclusion and levels of forage on performance of feedlot lambs**

Lairana A. Sardinha¹, Daniel M. Polizel¹, Alexandre A. Miszura¹, Arnaldo C. Limede¹, José paulo P. R. Barroso², André S. Martins¹, Gabriela B. Oliveira¹, Evandro Maia M. Ferreira², Janaina S S. Biava², Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS

7:30 p.m. PSX-4 **Performance of lambs born from ewes fed with different energy levels**

Luciano Brochine¹, Giuliana M. Oliveira¹, Mayara S. Pascotto¹, Mônica M. Silva¹, Luisa Elena P. Villa¹, Bruno R. Teofilo¹, Sarita B. Gallo¹, Luis O. Tedeschi²

¹University of Sao Paulo, ²Texas A&M University

7:30 p.m. PSX-32 **Prediction of energy requirements for maintenance and growth of female Korean black goats**

jinwook Lee¹, Sang-Hoon Lee², Sung-Soo Lee³, Dong-Kyo kim²

¹National Institute of Animal Science, Republic of Korea, ²National institute of animal science, ³National Institute of Animal Science, ROK

7:30 p.m. PSX-1 **Preference for inorganic sources of magnesium and phosphorus in sheep**

Juan J. Villalba¹, Mariana Pedernera², Alessandro Mereu³

¹Utah State University, ²Facultad de Ciencias Agropecuarias, Universidad Autónoma del Estado de Morelos, ³Yara Iberian

7:30 p.m. PSX-14 **Recent advances in understanding genetic variants associated with growth, carcass and meat productivity traits in sheep (*Ovis aries*): an update**

Alexander S. Zlobin¹, Natalia A. Volkova², Pavel M. Borodin³, Tatiana I. Aksenovich³, Yakov A. Tsepilov⁴

¹Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia, ²L.K. Ernst Federal Science Center for Animal Husbandry, ³L.K. Ernst Federal Science Center for Animal Husbandry, Dubrovitsy, Moscow Region, Russia,

⁴Novosibirsk State University, Novosibirsk, Russia

7:30 p.m. PSX-9 **Relationships among body condition score, linear measures, body mass index, and growth performance of yearling Alpine doelings**

Haiying Liu¹, Terry A. Gipson², Ryszard Puchala³, Arthur L. Goetsch³

¹American Institute for Goat Research Langston University; College of Animal and Veterinary Medicine, Shenyang Agricultural University, Shenyang, China, ²Langston, ³Langston University

7:30 p.m. PSX-5 **Reproductive organ weights, morphology and sperm reserves in intact and short scrotum post-pubertal male dairy sheep lambs**

Stephan Wildeus¹, Susan Schoenian², D. Philip Sponenberg³, Mary Beth Bennett⁴, Dahlia O'Brien¹

¹Virginia State University, ²University of Maryland, ³Virginia Tech, ⁴West Virginia University

7:30 p.m. PSX-38 **Reproductive performance of dorper ewes with varying days post-partum to ram introduction in the non-breeding season**

Victor V. Flores¹, Juan Martinez², Michelle Garcia³, Randy L. Stanko²

¹New Mexico State University, ²Texas A&M University- Kingsville, ³Texas A&M University - Kingsville

7:30 p.m. PSX-34 **Ruminating and lying behavior of dairy goats in confinement or grazing**

Luana Ribeiro¹, Sanae Ischii², Shirron LeShure², Terry A. Gipson³

¹American Institute for Goat Research, Langston University, ²American Institute for Goat Research Langston University, ³Langston

7:30 p.m. PSX-6 **The appropriate phase of follicle size and progesterone concentration could control ovulation of ruminant animal**

Junyou Li¹, Chunxiang Piao², Min Ma¹, Masayoshi Kuwahara¹

¹The University of Tokyo, ²Yanbian University

7:30 p.m. PSX-3 **The impact of energy nutrition planes of ewes on the productive and reproductive performance of their offspring**

Fernanda F. Santos¹, Mariluce C. Oliveira¹, Flávia M. Moreira¹, Lucas Pérciles A. Buzzato¹, Tamires S. Santos¹, Augusto H. Hauber Gameiro², Sarita B. Gallo¹, Luis O. Tedeschi³

¹University of Sao Paulo, ²School of Veterinary Medicine and Animal Science, University of São Paulo, Pirassununga, SP, Brazil, ³Texas A&M University

7:30 p.m. PSX-35 **The relationship between the survival rate of lambs and the amount of cubs in the litter**

Baylar S. Iolchiev ¹, Anastasia N. Vetokh ¹, Pavel M. Klenovitsky ¹, Natalia A. Volkova ¹, Natalia Anatolievna Zinovieva ², Vugar A. Bagirov ²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry

Thursday, July 11, 2019

Poster Upload Hours

6:45 AM - 2:00 PM

Ballroom D

Exhibit Hall Hours - Thursday

Chair:

8:00 AM - 12:00 PM

Ballroom D

Poster Session XI

7:15 AM - 8:15 AM

Ballroom D

7:15 a.m. PSXI-2 **A computer vision system for feed bunk management in beef cattle feedlot.**

Joao R. R. Dorea ¹, Sek Cheong ²

¹University of Wisconsin-Madison, ²University of Wisconsin_Madison

7:15 a.m. PSXI-26 **Assessing diet integrity and potential sorting behavior in backgrounding diets fed in a GrowSafe feed intake monitoring system**

Gleise M. Silva ¹, Federico Podversich ², Ana C. G. Luna ³, Gonzalo Barreneche ¹, Nicolas DiLorenzo ⁴

¹University of Florida, NFREC, ²University of Florida, ³University of Florida - North Florida Research and Education Center, ⁴Department of Animal Sciences, North Florida Research and Education Center (NFREC), University of Florida, Marianna, FL

7:15 a.m. PSXI-29 **Assessing enteric methane emissions from Nellore and Angus-Nellore crossbred cattle in a tropical, intensive beef cattle production system**

Isabella F. de Faria Maciel ¹, Fabiano A. Barbosa ², Thierry R. Tomich ³, Ramon C. Alvarenga ⁴, Ludhiana R. Ferreira ⁵, Jason E. Rowntree ⁶, Logan R. Thompson ⁶, Ângela Maria Q. Lana ⁵

¹MSU, ²De Heus Animal Nutrition B.V., ³Embrapa Dairy Cattle, ⁴Brazilian Agricultural Research Corporation Maize & Sorghum, ⁵Federal University of Minas Gerais, Veterinary School, ⁶Michigan State University

7:15 a.m. PSXI-27 **Association of an increased marbling score by dietary glycerol supplementation with lipid metabolism gene expression in Korean cattle steers**

Seon Pil Yoo¹, Dilla Fassah², Myunggi Baik³, sang Weon Na³, Inhyuk Jeong⁴, Dajinsol Jung³, Beak Seok-Hyeon², Hyeok Joong Kang³, HyunJin Kim³

¹Seoul national university, ²Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University, ³Seoul National University, ⁴Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Sciences, Seoul National University

7:15 a.m. PSXI-40 **Body reserves profile and rearing performance of meat ewes are genetically linked**

Elieel González-García¹, Tiphaine Macé¹, Dominique Hazard¹

¹INRA

7:15 a.m. PSXI-15 **Clove and cashew nut shell oils on the growth of ruminal gram-positive bacteria**

Vicente A. Diaz Avila¹, Venício M. Carvalho², Aylle Medeiros Matos², Edineia Bonin², Raquel Rossetti Moreli², Ricardo Araújo Castilho³, Rodolpho Martin Do Prado², Ivanor Nunes do Prado²

¹Universidade Estadual de Maringa, ²Universidade Estadual de Maringá, ³Safeeds Nutrição Animal

7:15 a.m. PSXI-18 **Clove Oil and Cashew Nut Shell Liquid have Antibacterial activity against some ruminal Prevotella**

Venício M. Carvalho¹, Vicente A. Diaz Avila², Aylle Medeiros Matos¹, Edineia Bonin¹, Amanda T. Teixeira Mendes¹, Ricardo Araújo Castilho³, Rodolpho Martin Do Prado¹, Ivanor Nunes do Prado¹

¹Universidade Estadual de Maringá, ²Universidade Estadual de Maringa, ³Safeeds Nutrição Animal

7:15 a.m. PSXI-12 **Comparative metabolomics of blood plasma from Hanwoo beef cattle at different ages and fed diets with different nutritional levels, by using liquid chromatography-mass spectrometry**

Jin Young Jeong¹, Minseok Kim¹, Kondreddy Eswar Reddy¹, Seul Lee¹, Soohyun Cho¹, Hyun-Jeong Lee²

¹National Institute of Animal Science, ²National Institute of Animal Science, Republic of Korea

7:15 a.m. PSXI-11 **Comparison of once night vs. traditional twice a day feed-delivering schedule on feedlot performance of back-growing cattle in hot climate**

Ruben Barajas¹, Alejandro Ramos-Suarez², Billy J. Cervantes-Pacheco³, Bertha Chongo-García⁴

¹Faculty of Agriculture Universidad Autónoma de Sinaloa, ²Universidad Autónoma de Sinaloa, ³Ganadera Los Migueles SA de CV, ⁴Instituto de Ciencia Animal

7:15 a.m. PSXI-4 **Composting management to reduce greenhouse gas and ammonia emissions from feedlot manure**
Maria A. Donnay¹, Jennifer J. Michal², GeorgiaLee J. Aksdal¹, Brian K. Lamb¹, Kristen A. Johnson¹

¹Washington State University, ²WSU

7:15 a.m. PSXI-37 **Differences in Thermoregulation Ability and Genetic Parameters of Skin Traits in Angus, Brahman and their Crossbreds**

Serdal Dikmen¹, Raluca G. Mateescu²

¹Bursa Uludağ University, ²University of Florida

7:15 a.m. PSXI-7 **Effect of a proprietary blend of botanicals on zootechnical and economical performances in Angus breed steers receiving a natural (NAE) diet**

Echbert GREEFF¹, Jeremy CARMAN¹, Michael RAY¹

¹Kender Bio Tech

7:15 a.m. PSXI-23 **Effect of garlic powder on supplement consumption and fly abundance in grazing cattle**

Obioha N. Durunna¹

¹Department of Applied Research, Lakeland College Vermilion, AB, Canada T9X 1K5

7:15 a.m. PSXI-8 **Effect of guava extract supplementation of japanese quail breeder (*Coturnix coturnix japonica*) on quality of neonate quail hatched by eggs stored at different periods pre-incubation**

Heloisa Helena C. Mello¹, Hyara Paula Fleuri Xavier¹, Alessandra Gimenez Mascarenhas¹, Nadja Suzana Mogyca Leandro¹, Edemilson Cardoso da Conceição¹, Angelica Louredo Pinheiro¹

¹Universidade Federal de Goiás

7:15 a.m. PSXI-5 **Effect of increasing feed intake during late gestation on piglet birth weight and weaning weight of low backfat thickness sows**

Yuanfei Zhou¹, Zuhong Liu¹, Jian Peng¹

¹Huazhong Agricultural University

7:15 a.m. PSXI-13 **Effect of *Lactobacillus* spp. and *Saccharomyces cerevisiae* alone or in combination, on ruminal fermentation, total tract nutrient digestibility and performance of growing beef cattle**

Jayakrishnan Nair¹, Yuxi Wang¹, Shanwei Xu², Brenda Smiley³, Hee Eun Yang¹, Tim A. McAllister¹

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²Alberta Agriculture and Forest, ³Corteva Agriscience

7:15 a.m. PSXI-38 **Effect of Nutrisound Dry Concentrate on Performance of Sows and Weaned Pigs on a Commercial Farm in Thailand**

Panumas Kongpanna¹, Uttra Jamikorn², John A. Doerr³, Dachrit Nilubol²

¹Chulalongkorn University, ²Chulalongkorn Univeristy, ³Agrarian Solutions

7:15 a.m. PSXI-36 **Effects of antifungal and fibrinolytic inoculants on fermentation quality, rumen digestibility, and aerobic stability of rye silage harvested at early dough stage**

dimas hand vidya paradhipta ¹, seongshin Lee ², hyuk jun lee ¹, youngho joo ³, In-Hag Choi ⁴, samchrul kim ³

¹Division of Applied Life Science (BK 21Plus, Insti. of Agric. & Life Sci.), Gyeongsang National University, ²Korean National Institute of Animal Science, ³Gyongsang National University, ⁴Department of Companion Animal and Animal Resources Sciences, Joongbu University, Geumsan, South Korea

7:15 a.m. PSXI-35 **Effects of cultivation stage and supplementation level of sprouted barley on nutrient content and fermentation quality of fermented diet**

hyuk jun lee ¹, youngho joo ², seongshin Lee ³, Jong Ho Park ⁴, Tae Il Kim ⁵, samchrul kim ²

¹Division of Applied Life Science (BK 21Plus, Insti. of Agric. & Life Sci.), Gyeongsang National University, ²Gyongsang National University, ³Korean National Institute of Animal Science, ⁴National Institute of Crop Science, ⁵National Institute of Animal Science

7:15 a.m. PSXI-6 **Effects of different feeding strategies during gestation on the reproductive performance of crossbred Landrace-Yorkshire sows**

Yuanfei Zhou ¹, Jian Peng ¹

¹Huazhong Agricultural University

7:15 a.m. PSXI-21 **Effects of different levels and protein sources on ruminal fermentation of feedlot Nellore steers fed high-concentrate diets**

Vinícius C. De Souza ¹, Juliana Messana ¹, Erick Batista ², Paulo Henrique Colovate ¹, Maria Júlia Ganga ¹, Leticia Faria ², Bruna Bosquini ¹, Yury Tatiana Granja-Salcedo ³, Telma Berchielli ¹

¹Sao Paulo State University, ²Federal University of Lavras, ³Corporación Colombiana de Investigación Agropecuaria - AGROSAVIA

7:15 a.m. PSXI-1 **Effects of mineral supplementation during summer on physiological variables and milk production in Holstein dairy cows**

Andrea Dahnae del Rio-Aviles ¹, Abelardo Correa-Calderon ¹, Leonel Avendaño-Reyes ¹, Milton G. Thomas ², R. Mark Enns ², Scott E. Speidel ², Miguel Angel Sanchez-Castro ², Ricardo Zamorano-Algandar ³, Pablo Luna-Nevárez ⁴

¹Universidad Autonoma de Baja California, ²Colorado State University, ³Instituto Tecnológico de Sonora, ⁴Instituto Tecnológico de Sonora

7:15 a.m. PSXI-31 **How is the ingestive behaviour of mid lactating Holstein cows grazing a fescue based pasture under two different defoliation intensities?**

Oliver Fast Hinz ¹, Pablo Chilibroste ¹, Gabriel Menegazzi ¹, Matías Oborsky ¹, Cristina Genro ², Pablo Soca ³, Diego A. Mattiauda ¹

¹Universidad de la República, Facultad de Agronomía, Animal Science Department, Grass Production and Utilization on Grazing Systems., ²Empresa Brasileira de Pesquisa Agropecuária., ³Facultad de Agronomía, Universidad de la República

7:15 a.m. PSXI-3 **Impact of Carbohydrate Source on Manure and Air Emission from Swine Diets**

Steven Trabue¹, Brian J. Kerr², Daniel Andersen³

¹USDA-Agricultural Research Service, ²USDA-ARS, ³Iowa State University

7:15 a.m. PSXI-17 **INFLUENCE OF HOPS ON *in vitro* RUMINAL FERMENTATION OF CORN GRAIN**

Yamicela Castillo-Castillo¹, Raul Solis¹, Armando A Quintana¹, Claudio Arzola-Alvarez¹, Ana Luisa Olivas-Palacios², Jaime Salinas-Chavira³, Robin Anderson⁴

¹UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ²UACH, ³Universidad Autonoma de Tamaulipas, ⁴ARS/USDA

7:15 a.m. PSXI-10 **Influence of monensin in the diet of temperate and tropically adapted cattle on the ruminal and fecal metabolome and microbiome**

Madeline M. Rabalais¹, Anil C. Somenahally², Catherine L. Wellman³, Charles R. Long⁴, Ronald D. Randel⁵

¹Texas A&M AgriLife Research, Overton, Louisiana Tech University, ²Texas A&M AgriLife, ³Texas A&M AgriLife Research, ⁴School of Veterinary Medicine and Biomedical Sciences, Texas A&M University, ⁵Texas A&M AgriLife Research, Overton, TX

7:15 a.m. PSXI-22 **Intensification of cow-calf production: How does the system respond biologically to energy inputs in a long-term horizon?**

Julio O. Barcellos¹, Fredy Gonzales², Amir G. Sessim¹, Julia A. Lima¹

¹NESPro/UFRGS – Department of Animal Science, Federal University of Rio Grande do Sul, ²IFET - NESPRO-UFRGS

7:15 a.m. PSXI-41 **Investigating the relationship between life history factors, live animal auction price, and carcass quality of cull dairy cows**

Ligia Cunha Moreira¹, Tiago L. Passafaro², Guilherme JM Rosa³

¹Department of Animal and Dairy sciences, University of Wisconsin-Madison, ²UW-Madison, ³University of Wisconsin-Madison

7:15 a.m. PSXI-19 **Levels of a Blend of Clove, Castor and Cashew Oils and microencapsulated active ingredients (eugenol, thymol and vanillin) against some ruminal *Prevotella***

Aylle Medeiros Matos¹, Venício M. Carvalho¹, Vicente A. Diaz Avila², Mariana Garcia Ornaghi¹, Edineia Bonin¹, Ricardo Araújo Castilho³, Rodolpho Martin Do Prado¹, Ivanor Nunes do Prado¹

¹Universidade Estadual de Maringá, ²Universidade Estadual de Maringá, ³Safeeds Nutrição Animal

7:15 a.m. PSXI-16 **Levels of a blend of clove, castor and cashew oils and microencapsulated active ingredients (eugenol, thymol and vanillin) on ruminal gram-positive bacteria population density**

Aylle Medeiros Matos ¹, Vicente A. Diaz Avila ², Venício M. Carvalho ¹, Mariana Garcia Ornaghi ¹, Edineia Bonin ¹, Ricardo Araújo Castilho ³, Rodolpho Martin Do Prado ¹, Ivanor Nunes do Prado ¹

¹Universidade Estadual de Maringá, ²Universidade Estadual de Maringa, ³Safeeds Nutrição Animal

7:15 a.m. PSXI-33 **Milk replacer formulation for dairy calves: substitution of some dairy protein by yeast-protein**

Christine JULIEN ¹, Radka Hulankov ², Björn Tönepöhl ³, Filip Jančík ⁴, Petr Homolka ⁴

¹Phileo Lesaffre Animal Care, ²University of Veterinary Science of Brno, ³Josera GmbH & Co. KG, ⁴Institute of Animal Science Prague

7:15 a.m. PSXI-20 **Nitrogen use efficiency is affected by protein source in feedlot Nellore steers fed high-concentrate diets**

Vinicius C. De Souza ¹, Kênia G. Alves ¹, Juliana Messana ¹, Erick Batista ², Letícia Campos ³, Ana Verônica Dias ¹, Laís Lima ⁴, Raquel Oliveira ¹, Carlos Pietro ¹, Telma Berchielli ¹

¹Sao Paulo State University, ²Federal University of Lavras, ³Virginia Polytechnic Institute and State University, ⁴São Paulo State University

7:15 a.m. PSXI-42 **Palm oil industry waste as an animal feed and its influence on growth performance of grower pigs**

O.A. Adebisi ¹, U.T. Oboli ¹, Isaac O. Adejumo ², O.A. Osinowo ³, Chuegbe Ugochiyere Chika ¹

¹University of Ibadan, ²Federal University Gashua, ³Federal College of Education, Osiele

7:15 a.m. PSXI-9 **Parameters of incubation of neonate japanese quail of japanese quail breeder (*Coturnix coturnix japonica*) fed guava extract and stored for different periods storage pre incubation**

Heloisa Helena C. Mello ¹, Hyara Paula Fleuri Xavier ¹, Alessandra Gimenez Mascarenhas ¹, Itallo Conrado Araújo ², Billy Noronha Marques ¹, Natiele Ferraz de Oliveira ¹

¹Universidade Federal de Goiás, ²Universidade Federal de Minas Gerais

7:15 a.m. PSXI-32 **Potential improvements in milk production of mid lactating Holstein cows through changes in the defoliation intensity on a mixed pasture.**

Oliver Fast Hinz ¹, Pablo Chilibroste ¹, Gabriel Menegazzi ¹, Matías Oborsky ¹, Pablo Soca ², Cristina Genro ³, Diego A. Mattiauda ¹

¹Universidad de la República, Facultad de Agronomía, Animal Science Department, Grass Production and Utilization on Grazing Systems., ²Facultad de Agronomía, Universidad de la República, ³Empresa Brasileira de Pesquisa Agropecuária.

7:15 a.m. PSXI-28 **Reducing dietary crude protein and supplementation with amino acids helps mitigate the environmental impacts of growing pigs production determined by the life cycle assessment**

Lucas Antonio C. Esteves ¹, Natália Y. Sitanaka ¹, Alessandra N. T. R. Monteiro ², Suelen M. Einsfeld ¹, Lucas P. Bonagurio ¹, Paulo C. Pozza ³

¹Universidade Estadual de Maringá, ²ANIMINE, ³State University of Maringá

7:15 a.m. PSXI-24 **Rumen temperature, fermentation and microbial signatures are poorly associated with steer feed-efficiency profiles**

Obioha N. Durunna ¹, Daalkhajav Damiran ², John R. Campbell ³, Jeff A. Carroll ⁴, Herbert A. Lardner ⁵

¹Department of Applied Research, Lakeland College Vermilion, AB, Canada T9X 1K5,

²Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK, Canada, S7N 5A8, ³Department of Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, ⁴USDA, ⁵Department of Animal and Poultry Science, University of Saskatchewan

7:15 a.m. PSXI-34 **Supplementation of grazing Nellore beef heifers during mid-to-late gestation as a strategy to improve skeletal muscle development of the offspring**

Rones G. De Paula ¹, Joanis T. Zervoudakis ², Luciana K. Hatamoto-Zervoudakis ³, Marcos A. Souza ¹, Nelcino F. De Paula ¹, Ana Paula S. borges ¹, Otávio Machado-Neto ⁴, Caroline P. Costa ⁵

¹Federal University of Mato Grosso, ²Universidade Federal de Mato Grosso, ³Colorado State University, ⁴College of Veterinary Medicine and Animal Science of São Paulo State University., ⁵College Pioneer Union of Social Integration

7:15 a.m. PSXI-14 **Supplementation with a blend containing Baccharis dracunculifolia and Tamarindus indica improve the oxidative state of steers in finishing phase**

Vicente A. Diaz Avila ¹, Edineia Bonin ², Venício M. Carvalho ², Lucas Stafuza Moreira ², Jurandir Fernando Comar ², Camila Mottin ², Benicio Alves de Abreu Filho ², Ivanor Nunes do Prado ²

¹Universidade Estadual de Maringá, ²Universidade Estadual de Maringá

7:15 a.m. PSXI-39 **The effect of addition of proteolytic enzyme and microorganisms on feed efficiency, colon microorganisms, and manure odor in broiler chickens**

Sangsoo Sun ¹, Cheolju Park ¹, Hyunhae Na ², Whoseung Lee ², Hoyong Park ², Sukho Kim ²

¹Chonnam National University, ²CNU

7:15 a.m. PSXI-25 **The effect of lead on aminotransferases serum activity in European carp**

Polina A. Polistovskaia ¹, Abram I. Erukashvili ¹, Anna I. Kozitcyna ¹, Katerina P. Kinarevskaia ², Alesya A. Bakhta ¹, Anna B. Balykina ¹, Larisa Y. Karpenko ¹, Valerii G. Skopichev ³, Anastasia A. Ignateva ⁴, Polina D. Bokhan ²

¹Saint-Petersburg State University of Veterinary Medicine, ²St. Petersburg State Academy of Veterinary Medicine, ³St. Petersburg state Academy of veterinary medicine, ⁴Federal State Budgetary Educational Institution of Higher Education "Saint-Petersbug State University of Veterinary Medicine"

7:15 a.m. PSXI-30 **The effects of hybrid and maturity on the nutritive value of snaplage**

Jessica Gusmão ¹, Marcio Bastos ¹, Luciana Lima ¹, Marcus Cardoso ¹, Thiago Bernardes ²

¹Department of Animal Science, University of Lavras, ²University of Lavras, Brazil

Poster Session XII

8:15 AM - 9:15 AM

Ballroom D

8:15 a.m. PSXII-21 **Antioxidant effect of Yerba mate extract, included in finishing lamb diets on quality and conservation of meat**

Yuli Andrea A. Peña Bermudez ¹, Richard R. Lobo ², Tamyres Amorim ³, Danny Alexander Rojas Moreno ⁴, Annelise Aila Gomes Lobo ⁵, Rafaela Vincenzi ¹, Ives Claudio C. Da Silva Bueno ⁴

¹University of Sao Paulo, ²University of Florida, ³Faculdade de Zootecnia e Engenharia de Alimentos (FZEA), Universidade de São Paulo (USP), ⁴Department of Animal Science, College of Animal Science and Food Engineering, Pirassununga, SP, Brazil., ⁵University Of São Paulo

8:15 a.m. PSXII-4 **Beef quality from animals in long term feeding with DDG's in the diet**

Josiane F Lages ¹, Alvair Hoffmann ², Adriana Ferrari ³, Lutti Maneck Delevatti ⁴, Ricardo Reis ⁵

¹ASAS, ²Trouw Nutrition Brazil, ³São Paulo State University, Jaboticabal, ⁴Sao Paulo State University, Jaboticabal, Brazil, ⁵Department of Animal Science, Unesp, Jaboticabal

8:15 a.m. PSXII-25 **Characterization and evaluation of the in vitro dry matter digestibility of corn stover spent used to produce edible fungi**

Edgar García-Orozco ¹, Claudia Cecilia Márquez-Mota ², Hermilo Leal-Lara ³, Atmir Romero-Pérez ⁴, Luis Corona ⁴, Claudia Cecilia Márquez-Mota ¹

¹FMVZ, UNAM, ²Universidad Nacional Autónoma de México., ³FQ, UNAM, ⁴Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.

8:15 a.m. PSXII-9 **Complete feed versus concentrate and straw fed separately: effect on feed intake, sorting, animal behavior, and rumen pH and digestibility in crossbred Angus bulls fed high-concentrate diets**

Sandra Genis ¹, Marcal Verdu ², Jordi Cucurull ³, Maria Devant ⁴

¹IRTA, ²Alimentació Animal i Producció, bonÀrea Agrupa, ³Grup BonArea, ⁴IRTA, Ruminant Production

8:15 a.m. PSXII-2 **DI/LC-MS/MS-based plasma metabolomics reveals the effects of sequestering agents on the metabolic status of dairy cows challenged with dietary aflatoxin B1**

Ibukun M. Ogunade ¹, Yun Jiang ², Adegbola T. Adesogan ³

¹Kentucky State University, ²Department of Animal Sciences, University of Florida,

³Department of Animal Sciences and Innovation Lab for Livestock Systems, University of Florida

8:15 a.m. PSXII-28 **Effect of corn type and tylosin inclusion on performance and liver function in feedlot heifers**

David M. Crawford ¹, Joshua C. McCann ²

¹West Texas A&M University, ²University of Illinois

8:15 a.m. PSXII-38 **Effect of crude protein sources on feedlot performance and carcass traits of nellore young bulls**

Juliano José R. Fernandes ¹, Lorena E. L. M. Bomfim ¹, Daniel Augusto A. Teixeira ², Victor R. M. Couto ¹, Ana Laura A. Lopes ¹

¹Goiás Federal University, ²Goiás Federal University

8:15 a.m. PSXII-13 **Effect of varying daily supplementation frequency on blood plasma cholesterol profile of grazing dairy cows**

Marcia Cristina A. Santana ¹, Claudia B. Sampaio ², Helton F. Oliveira ³, Gustavo H. M. Brito ⁴, Larisa Jancewicz ⁵, Alyson Pinheiro ⁶

¹Baiano Federal Institute, Bahia, ²Federal University of Viçosa, ³Federal University of Goiás, ⁴Evangélica Faculty, ⁵University of Saskatchewan, ⁶Emater

8:15 a.m. PSXII-32 **Effects flavomycin, narasin and salinomycin on ruminal fermentation of Nellore steers fed high forage diet**

Arnaldo C. Limede ¹, Daniel M. Polizel ¹, Alexandre A. Miszura ¹, André S. Martins ¹, José paulo P. R. Barroso ², Lairana A. Sardinha ¹, Marcelo Baggio ¹, Gabriela B. Oliveira ¹, Rodrigo S. Marques ³, Alexandre Vaz Pires ²

¹University of Sao Paulo, ²ASAS, ³Elanco

8:15 a.m. PSXII-23 **Effects of a recombinant fibrolytic enzyme on fiber digestion, ruminal fermentation, nitrogen balance and total tract digestibility of heifers fed a high forage diet**

Tao Ran ¹, Atef Saleem ², YiZhao Shen ³, Gabriel Ribeiro ⁴, Adrian Tsang ⁵, Karen A. Beauchemin ⁶, Wenzhu Yang ⁷, Tim A. McAllister ⁷

¹AAFC, Lethbridge Research and Development Centre, ²South Valley University, ³Hebei Agricultural University, ⁴Department of Production Animal Health, Faculty of Veterinary Medicine, University of Calgary, Calgary, AB T2N 4Z6, Canada, ⁵Centre for Structural and Functional Genomic, Concordia University, Montreal, QC H4B 1R6, Canada, ⁶Agriculture and Agri-Food Canada, ⁷Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

8:15 a.m. PSXII-20 **Effects of association between monensin, calcium nitrate and tannin on enteric methane production in cannulated beef cattle**

Alice H. Assumpção ¹, Cristiane Tropaldi ², Guilherme Sene ³, Ramos Tseu ¹, Flávio Perna Junior ⁴, Tamires Nunes ¹, Tauane Silva ¹, Paulo H. Rodrigues ⁴

¹Department of Animal Science, College of Food Engineer and Animal Science, ²Department of Animal Science, College of Food Engineer and Animal Science, University of Sao Paulo, ³Department of Animal Science, College of Food Engineer and Animal Science, University of Sao Paulo, ⁴Department of Animal Nutrition and Production, College of Medicine Veterinary and Animal Science, University of Sao Paulo

8:15 a.m. PSXII-37 **Effects of different sources of monensin on performance and carcass traits of feedlot beef cattle**

Juliano José R. Fernandes ¹, Daniel Augusto A. Teixeira ², Lorena E. L. M. Bomfim ¹, Victor R. M. Couto ¹, Catarina N. Lopes ³

¹Goiás Federal University, ²Goiás Federal University, ³Elanco

8:15 a.m. PSXII-1 **Effects of early weaning on feed intake, growth performance, and diarrhea rate of Hu lambs**

shiqin wang¹, qiyu diao², kai cui², yanliang bi², naifeng zhang²

¹Pastoral Agriculture Science and Technology, Lanzhou University, Lanzhou 730020,,

²Chinese Academy of Agricultural Sciences, Key Laboratory of Feed Biotechnology of the Ministry of Agriculture, Feed Research Institute, Beijing 100081

8:15 a.m. PSXII-8 **Effects of fat matrix and particle size of coated methionine on bypass fraction of dry matter and nitrogen**

Leandro Royo¹, Monica Puyalto¹, Trinidad De Evan², Juan Jose Mallo¹, Maria Dolores Carro²

¹Norel S.A., ²Universidad Politécnica de Madrid

8:15 a.m. PSXII-33 **Effects of feed additives on performance of yearling bulls fed high forage diet**

Alexandre A. Miszura¹, Daniel M. Polizel¹, José paulo P. R. Barroso², André S. Martins¹, Gabriela B. Oliveira¹, Arnaldo C. Limede¹, Lairana A. Sardinha¹, Francisco M. Neto³, Rodrigo S. Marques⁴, Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS, ³Sao Paulo State University, ⁴Elanco

8:15 a.m. PSXII-24 **Effects of supplementing ruminally protected and non-protected active dried yeast on fecal bacterial community of finishing beef steers**

Tao Ran¹, Peixin Jiao², Ousama Alzahal³, Xiaolai Xie⁴, Karen A. Beauchemin⁵, Wenzhu Yang⁶

¹AAFC, Lethbridge Research and Development Centre, ²College of Animal Science and Technology, Northeast Agricultural University. Harbin, Heilongjiang, 150081, China, ³AB Vista, ⁴College of Animal Science and Technology, Northeast Agricultural University, ⁵Agriculture and Agri-Food Canada, ⁶Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

8:15 a.m. PSXII-40 **Encapsulated Nitrate to Beef Cattle Growing under Grazing System supplemented during the Dry-rainy Season**

Cibelle Borges Figueiredo¹, Mauricia B. Silva², Juliano José De Resende Fernandes¹, Higor Rocha², Alana M. Calaça², Nathalia M. Teles², Rafael C. Araujo³, Victor R. Couto¹

¹Universidade Federal de Goiás, ²Universidade Federal de Goias, ³GRASP

8:15 a.m. PSXII-41 **Evaluation of Grain Sorghum Hybrids Reveals Potential for Improving Ruminal Fermentation**

James R. Johnson¹

¹Kansas State University

8:15 a.m. PSXII-19 **Feed additives association for the rumen fermentation manipulation and reduce production methane in Nelore cattle**

Guilherme Sene¹, Cristiane Tropaldi², Alice H. Assumpção³, Ramos Tseu³, Júlia Oliveira², Isabelle Mendes², Flávio Perna Junior⁴, Paulo H. Rodrigues⁴

¹Department of Animal Science, College of Food Engineer and Animal Science, University of Sao Paulo, ²Department of Animal Science, College of Food Engineer and Animal Science, University of Sao Paulo, ³Department of Animal Science, College of Food Engineer and Animal Science, ⁴Department of Animal Nutrition and Production, College of Medicine Veterinary and Animal Science, University of Sao Paulo

8:15 a.m. PSXII-5 **Feed Processing-Induced Changes in Protein Molecular Structure in Relation to Nutrient Utilization and Availability of Warm-Season Sorghum Grain (Sorghum bicolor) in Ruminants**

Ganqi Deng¹, María E. T. Lechuga², Peiqiang Yu³

¹University of Saskatchewan, ²Universidad Autónoma Chapingo, ³Department of Animal and Poultry Science, University of Saskatchewan

8:15 a.m. PSXII-17 **Fiber content in diets for feedlot lambs: carcass characteristics**

Janaina S S. Biava¹, Nathalia R. Eckermann², Thamires U. Sturion³, Daniel M. Polizel³, Paulo Dias Junior², Adrielly da Silva², Matheus Carlis⁴, Rebecca Riet², Rhaissa Garcia de Assis⁵, Alexandre Vaz Pires¹, Evandro Maia M. Ferreira¹

¹ASAS, ²ESALQ/University of São Paulo, ³University of Sao Paulo, ⁴FZEA-USP, ⁵State University of Ponta Grossa

8:15 a.m. PSXII-14 **Fiber content in diets for feedlot lambs: performance**

Evandro Maia M. Ferreira¹, Nathalia R. Eckermann², Janaina S S. Biava¹, Jamily H Comelli¹, Thamires U. Sturion³, Daniel M. Polizel³, Gabriela B. Oliveira³, José paulo P. R. Barroso¹, Lairana A. Sardinha³, Terezinha T. de Souza⁴, Rhaissa Garcia de Assis⁵, Alexandre Vaz Pires¹

¹ASAS, ²ESALQ/University of São Paulo, ³University of Sao Paulo, ⁴UFAM/Federal University of Amazonas, ⁵State University of Ponta Grossa

8:15 a.m. PSXII-15 **Fiber content in diets for feedlot lambs: ruminal and cecal pH and short chain fatty acids**

Evandro Maia M. Ferreira¹, Nathalia R. Eckermann², Janaina S S. Biava¹, Matheus Avelino², Letícia Pasqualino³, André S. Martins³, Arnaldo C. Limede³, Marcelo Baggio³, Ancelmo Cunha⁴, Francisco Montanaro Neto⁵, Matheus F. F. V de Paula⁶, Alexandre Vaz Pires¹

¹ASAS, ²ESALQ/University of São Paulo, ³University of Sao Paulo, ⁴UFAM/Federal University of Amazonas, ⁵Paulista State University "Júlio Mesquita Filho", ⁶State University of Goiás

8:15 a.m. PSXII-16 **High and medium ADG on LH profile in early-weaned heifers**

Janaina S S. Biava¹, Marcos V C. Ferraz², Evandro Maia M. Ferreira¹, Daniel M. Polizel³, Gabriela B. Oliveira³, Guilherme D. Nogueira⁴, Alexandre Vaz Pires¹

¹ASAS, ²Federal University of Amazonas, ³University of Sao Paulo, ⁴Sao Paulo State University

8:15 a.m. PSXII-3 **Impact of a Fibrolytic Enzyme Additive on Digestibility and Performance in the Grower and Early Finisher Phases of Feedlot Cattle**

Melissa S. Williams¹, Ousama Alzahal², Ira B. Mandell¹, Brian W. McBride¹

¹University of Guelph, ²AB Vista

8:15 a.m. PSXII-11 **In vitro fermentative parameters of diets containing increasing inclusions of soybean molasses for sheep**

Maria Carolina G. Arruda¹, Sérgio A. G. Pereira-Junior², Marco Túlio C. Almeida³

¹São Paulo State University, ²Sao Paulo State University, ³Federal University of Piauí

8:15 a.m. PSXII-6 **In vitro fermentative parameters of diets containing increasing inclusions of WDG for feedlot sheep**

João Pedro A. Bertoco¹, Marco Túlio C. Almeida², Maria Carolina G. Arruda³, Sérgio A. G. Pereira-Junior¹, Antonio A. Cruz³, Rodrigo S. Torres³, Jane M. B. Ezequiel¹

¹Sao Paulo State University, ²Federal University of Piauí, ³São Paulo State University

8:15 a.m. PSXII-7 **In vitro ruminal and total tract digestibility of diets containing high inclusions of wet distillers grains for feedlot sheep**

Marco Túlio C. Almeida¹, João Pedro A. Bertoco², Maria Carolina G. Arruda³, Sérgio A. G. Pereira-Junior², Antonio A. Cruz³, Rodrigo S. Torres³, Jane M. B. Ezequiel²

¹Federal University of Piauí, ²Sao Paulo State University, ³São Paulo State University

8:15 a.m. PSXII-36 **Modelling in vitro gas production kinetics of fresh alfalfa incubated with inocula from five ruminant species**

Richard R. Lobo¹, Marcos I. Marcondes², Paulo H. Rodrigues³, Antonio P. Faciola⁴, Rafael Pinheiro⁵, Ives Claudio C. Da Silva Bueno⁶

¹University of Florida, ²Universidade Federal de Vicosa, ³Department of Animal Nutrition and Production, College of Medicine Veterinary and Animal Science, University of Sao Paulo, ⁴Department of Animal Sciences, University of Florida, Florida, 32608, United States, ⁵State University of Sao Paulo, ⁶Department of Animal Science, College of Animal Science and Food Engineering, Pirassununga, SP, Brazil.

8:15 a.m. PSXII-34 **Narasin improves performance of grazing Nellore yearling bulls receiving protein supplement**

Daniel M. Polizel¹, Arnaldo C. Limede¹, Alexandre A. Miszura¹, André S. Martins¹,

Gabriela B. Oliveira¹, Lairana A. Sardinha¹, Marcelo Baggio¹, Alexandre Vaz Pires²

¹University of Sao Paulo, ²ASAS

8:15 a.m. PSXII-22 **Performance of Nellore bulls fed with rehydrated corn silage or rehydrated sorghum silage or sorghum grain in substitution of corn grain**

Josimari R. Paschoaloto¹, Laissa A. Guimarães², Ellem Maria A. Matos², Severino D.

Junqueira Villela²

¹Federal University of Jequitinhonha and Mucury Valleys, ²Federal University of Mucuri and Jequitinhonha Valleys

8:15 a.m. PSXII-39 **Probiotic on finishing phase of Nelore bulls fed tropical grass on dry season**

Alana M. Calaça¹, Mauricia B. Silva¹, Juliano José De Resende Fernandes², Cibelle Borges Figueiredo², Nathalia M. Teles¹, Guilherme F. Berti¹, Victor R. Couto²

¹Universidade Federal de Goiás, ²Universidade Federal de Goiás

8:15 a.m. PSXII-31 **Severity of Hay Processing on Dry Matter Intake, Sorting Behaviour, and Apparent Total Tract Digestibility in Lambs**

Liam Kelln¹

¹University of Saskatchewan

8:15 a.m. PSXII-12 **Silages and roughage sources in the Brazilian beef feedlots**

Thiago Bernardes¹, Thais Castro²

¹University of Lavras, Brazil, ²Nutricorp

8:15 a.m. PSXII-30 **The combination of essential oils and exogenous amylases reduces fecal starch of feedlot finishing cattle fed different roughage sources**

Laura B. Toseti¹, Rodrigo Goulart², Vinícius Gouvêa³, Tiago S. Acedo⁴, Guilherme S. Vasconcellos⁵, Paulo Roberto Leme¹, Arlindo Saran Netto¹, Saulo L. Silva¹

¹University of São Paulo, Pirassununga, SP, Brazil – College of Animal Science and Food Engineering, ²FZEA-USP, ³IFAS - Range Cattle Research and Education Center, University of Florida, ⁴DSM Produtos Nutricionais Brasil S.A., ⁵DSM Nutritional Products

8:15 a.m. PSXII-27 **The effect of Quercus cortex extract added separately or with probiotic to ruminal fluid of cattle (in vitro) on microbiota and fermentation characteristics**

Galimzhan Duskaev¹, Galimzhan Duskaev¹, Baer Nurzhanov¹, Albert Rysaev¹, Shamil Rakhmatullin¹, Ksenia Inchagova¹, Vitalii Rayzanov¹

¹Federal Research Center of Biological Systems and Agro-technologies of the Russian Academy of Sciences

8:15 a.m. PSXII-18 **The influence of molybdenum in drinking water or feed on apparent absorption and retention of molybdenum and copper in beef steers.**

Meghan P. Thorndyke¹, Nicole M. Tillquist¹, Nicole M. Jones¹, Terry E. Engle¹

¹Colorado State University

8:15 a.m. PSXII-42 **The lactational response in dairy cows to supplementation of calcium gluconate embedded in a fat matrix**

John Doelman¹, Leslie L. Mcknight², Pieter Winia³, Gera Uittenbogaard³, Michelle Carson⁴, Douglas Waterman⁵, John Metcalf⁵

¹Trouw Nutrition R&D, ²3Trouw Nutrition Canada Inc., ³Wageningen University, ⁴Trouw Nutrition Agresearch, ⁵Trouw Nutrition

8:15 a.m. PSXII-35 **Tolerance of fattening cattle to slow release urea**

Maria Devant¹, Vaughn Holder², Colm Moran³

¹IRTA, Ruminant Production, ²Alltech Inc., ³Alltech SARL

8:15 a.m. PSXII-29 **Utilizing coproducts as an alternative to forage in adapting feedlot cattle to finishing diets affects the ruminal microbiome**

David M. Crawford ¹, Joshua C. McCann ²

¹West Texas A&M University, ²University of Illinois

8:15 a.m. PSXII-10 **Voluntary water intake of calves and fattening Holstein bulls fed high-concentrate diets**

Maria Devant ¹, Marçal Verdu ², Carles Medinya ³, Joan Riera ⁴, Sonia Martí ¹

¹IRTA, Ruminant Production, ²Alimentació Animal i Producció, bonÀrea Agrupa, ³SINUAL,

⁴Nanta SA

8:15 a.m. PSXII-26 **Withdrawing monensin by the end of finishing period increases intake and changes ruminal fermentation patterns of cannulated Nelore cattle**

João Victor T. Dellaqua ¹, André Luiz N. Rigueiro ¹, Antonio M. M. Silvestre ², Leandro A. F. F. Silva ³, Katia L. R. R. Souza ³, Victor Carvalho M. Costa ⁴, Danilo D. Millen ⁵

¹School of Veterinary Medicine and Animal Science, São Paulo State University (UNESP), Botucatu campus, ²School of Veterinary Medicine and Animal Science, São Paulo State University (UNESP), Botucatu, Brazil, ³College of Technology and Agricultural Sciences, São Paulo State University (UNESP), Dracena, Brazil, ⁴College of Technology and Agricultural Sciences, São Paulo State University (UNESP), Dracena campus, ⁵São Paulo State University (UNESP), Jaboticabal campus, Brazil

ASAS-NANP Symposium II: Ruminant/Nonruminant Feed Composition

Chair: Phil Miller, Dept. of Animal Science, University of Nebraska

8:30 AM - 12:00 PM

Meeting Room 15

8:30 a.m. **ASAS-NANP Symposium II Introduction**

8:40 a.m. 323 **Overview of the NRSP-9/NANP Program**

Andres A. Schlageter-Tello ¹

¹National Animal Nutrition Program, University of Kentucky

9:20 a.m. 324 **Statistical methods and importance of screening ingredient composition data sets**

William Weiss ¹

¹The Ohio State University

10:00 a.m. **ASAS-NANP Symposium II Break**

10:20 a.m. 325 **Novel ingredients and challenges for feed formulation**

Liz Koutsos ¹

¹EnviroFlight

11:00 a.m. 326 **Carbohydrate composition: Challenges to the optimal use of fiber across animal species, and potential solutions**

George C. Fahey ¹

¹University of Illinois at Urbana-Champaign

11:40 a.m. **ASAS-NANP Symposium II Q&A**

Breeding and Genetics Session V: Genomic Methods & Software

Chair: Heather Bradford, Virginia Tech

9:00 AM - 11:30 AM

Meeting Room 14

9:00 a.m. **Presentation of Award: Rockefeller Prentice Award in Animal Breeding and Genetics**

Matthew C. McClure ¹

¹ABS Global

9:05 a.m. 328 **Awardee Talk: The importance of genetic improvement to the sustainability of animal agriculture**

Alison L. Van Eenennaam ¹

¹University of California, Davis Department of Animal Science

9:30 a.m. 332 **Indirect predictions based on SNP effects from GBLUP with increasing number of genotyped animals**

Andre Garcia ¹, Yutaka Masuda ², Stephen P. Miller ³, Ignacy Misztal ¹, Daniela Lourenco ¹

¹University of Georgia, ²The University of Georgia, ³Angus Genetics Inc.

9:45 a.m. 335 **Genomic predictions with a multi-breed genomic relationship matrix**

Yvette Steyn ¹, Daniela Lourenco ¹, Ignacy Misztal ¹

¹University of Georgia

10:00 a.m. 334 **Investigating core-dependent changes in predictions using the algorithm for proven and young in ssGBLUP**

Daniela Lourenco ¹, Shogo Tsuruta ¹, Ivan Pocrnic ¹, Ignacy Misztal ¹

¹University of Georgia

10:15 a.m. **Breeding and Genetics Session V: Genomic Methods & Software Break**

10:30 a.m. 331 **Efficient quality control methods for genomic and pedigree data used in routine genomic evaluation**

Yutaka Masuda ¹, Andres Legarra ², Ignacio Aguilar ³, Ignacy Misztal ⁴

¹The University of Georgia, ²UMR GenPhySE, INRA, ³Instituto Nacional de Investigacion Agropecuaria, ⁴University of Georgia

10:45 a.m. 333 **Animal –GRIN a platform for animal genetic information.**

Harvey D. Blackburn ¹, Ted Manahan ², Carrie S. Wilson ², Wenkai Fu ³, Eduardo Cajueiro ⁴, Milton G. Thomas ⁵, Samuel R. Paiva ⁴

¹USDA ARS National Animal Germplasm Program, ²USDA-ARS National Animal Germplasm Program, ³Agriculture and Agri-Foods Canada, ⁴EMBRAPA, ⁵Colorado State University

11:00 a.m. 329 **Mendelian sampling, QTL similarity, and accuracy of genomic selection**

Ashley S. Ling¹, Samuel E. Aggrey², Romdhane Rekaya³

¹University of Georgia, Department of Animal and Dairy Science, ²The University of Georgia,

³University of Georgia

11:15 a.m. 330 **A hybrid model for genomic selection using prioritized SNPs based on FST scores in the presence of non-genotyped animals**

Sajjad Toghiani¹, Ling-Yun Chang², El H. Hay¹, Andrew J. Roberts¹, Samuel E. Aggrey³, Romdhane Rekaya⁴

¹USDA Agricultural Research Service, ²ABS Global Inc, ³The University of Georgia,

⁴University of Georgia

Physiology Session II

Chair: Thomas Welsh, Texas A&M University; Texas A&M AgriLife Research, College Station

9:00 AM - 11:40 AM

Meeting Room 10C

9:00 a.m. **Presentation of Awards: ASAS Retiree Service Award and Agri-King Outstanding Graduate Student Award**

Thomas H. Welsh¹, David Jones²

¹Texas A&M University; Texas A&M AgriLife Research, College Station, ²Agri-King

9:10 a.m. 377 **Awardee Talk - Tools and Skills for Building a Successful Career**

E. Keith Inskeep¹

¹West Virginia University

9:40 a.m. 373 **Response to kisspetin as a possible reference for puberty age in heifer**

Guilherme D. Nogueira¹, Ana Flavia T. Paiva², Tiago Rodrigues³, Waneska Frizzarini⁴, João Scaliante⁴

¹Sao Paulo State University, ²UNESP- Sao Paulo State University, ³Fazenda Santa Encarnacao, ⁴UNESP

9:55 a.m. 372 **Dam body condition during lactation influences piglet growth and maturation pre-finishing**

Lea A. Rempel¹, Brittney Keel², William T. Oliver¹, Wells James¹, Clay Lents³, Gary Rohrer⁴

¹USDA, ARS, USMARC, ²USDA, ARS, U.S. Meat Animal Research Center, ³USDA, ⁴US Meat Animal Research Center

10:10 a.m. 374 **Effects of maternal nutrition on secretion of leptin in the neonatal heifer and interaction of maternal and postnatal nutrition on age at puberty and postpubertal secretion of luteinizing hormone**

Meaghan M. O'Neil ¹, Sarah West ¹, Tatiane S. Maia ², Rodolfo C. Cardoso ¹, Gary L. Williams ³

¹Texas A&M University, ²Texas A&M AgriLife Research / Texas A&M University, ³Texas A & M AgriLife Research

10:25 a.m. 375 **The effect of supplemental protein from weaning until first breeding on heifer development and uterine environment characteristics.**

Kiernan J. Brandt ¹, Taylor B. Ault-Seay ², Liesel G. Schneider ³, Phillip R. Myer ⁴, Kyle J. McLean ²

¹University of Tennessee Knoxville, ²University of Tennessee, Knoxville, ³Animal Science Department, University of Tennessee Institute of Agriculture, ⁴Department of Animal Science- University of Tennessee

10:40 a.m. 449 **Late-Breaking: Impact of feeding a propriety yeast-based synbiotic product on fecal shedding of top-7 Shiga toxin-producing Escherichia coli in feedlot cattle**

Raghavendra G. Amachawadi ¹, Xiaorong Shi ², LeighAnn George ³, Miles Theurer ⁴, Twig Marston ⁵, Vaughn Holder ⁶, T G. Nagaraja ²

¹Kansas State University College of Veterinary Medicine, ²Kansas State University, ³Kansas State University, ⁴Veterinary Research & Consulting Services, ⁵Hubbard Feeds-Alltech, Inc, ⁶Alltech Inc.

10:55 a.m. 450 **Late-Breaking: Effects of bedding on feedlot receiving phase growth performance in beef steers during the winter in eastern South Dakota**

Dathan Smerchek ¹, Zachary K. Smith ¹

¹South Dakota State University

11:10 a.m. 376 **Awardee Talk - Prenatal transportation stress alters physiology of suckling Brahman calves as mediated by changes in DNA methylation**

Brittni P. Littlejohn ¹, Debbi M. Price ², Don A. Neuendorff ³, Jeff A. Carroll ⁴, Rhonda C. Vann ⁵, Penny K. Riggs ⁶, David G. Riley ⁶, Charles R. Long ⁷, Thomas H. Welsh ⁸, Ronald D. Randel ⁹

¹Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State, MS, ²Texas A&M AgriLife Research & Extension Center at Overton; Department of Animal Science, Texas A&M University, ³Texas A&M AgriLife Research & Extension Center at Overton, ⁴USDA, ⁵Mississippi State University, ⁶Texas A&M University, ⁷School of Veterinary Medicine and Biomedical Sciences, Texas A&M University, ⁸Texas A&M University; Texas A&M AgriLife Research, College Station, ⁹Texas A&M AgriLife Research, Overton, TX

Ruminant Nutrition Session I
Chair: Robin Anderson, ARS/USDA
9:00 AM - 11:45 AM
Meeting Room 16A

9:00 a.m. 384 **Metabolizable energy content of feeds: Errors that need attention**
Fredric N. Owens¹, Richard A. Zinn²
¹Oklahoma State University, ²University of California - Davis

9:15 a.m. 385 **Feed efficiency of beef cattle in low-protein diets is driven by nitrogen use efficiency**
Diogo Fleury Azevedo Costa¹, Peter Carmona¹, Lais Lima¹, Brandon Fraser¹, Luis Prada e Silva¹
¹The University of Queensland

9:30 a.m. 388 **Bayou Beef: A random effects model of crustacean waste as a feedstock**
Taylor Burrell¹, Shelby L. Wood¹, Nichole M. Cherry², James P. Muir³, William B. Smith⁴
¹Department of Animal Science and Veterinary Technology, Tarleton State University, ²Texas A&M AgriLife Research, ³TAMU, ⁴Tarleton State University

9:45 a.m. 387 **Supplementing a yeast-derived product to feedlot cattle: impacts on performance, physiological responses, and carcass characteristics**
Stefania Pancini¹, Reinaldo F. Cooke², Alice P. Brandão², Nicholas W. Dias¹, Claire L. Timlin³, Pedro Levy Piza Fontes², Alvaro Sales⁴, Jordan Wicks¹, Adam R. Murray⁵, Vitor R G. Mercadante⁶
¹Virginia Tech, ²Texas A&M University, ³Animal and Poultry Sciences, Virginia Tech, ⁴Animal and Poultry Sciences, Virginia Tech, Blacksburg, VA, USA., ⁵Department of Animal and Poultry Sciences, Virginia Tech, ⁶Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

10:00 a.m. 386 **Effect of essential oil and exogenous enzyme on feed intake, digestibility and rumen fermentation of finishing cattle fed different roughage sources**
Laura B. Toseti¹, Rodrigo S. Goulart¹, Vinicius N. Gouvêa², Tiago S. Acedo³, Guilherme S. Vasconcellos⁴, Mariane Beline¹, Arlindo S. Netto¹, Saulo L. Silva¹
¹University of São Paulo, Pirassununga, SP, Brazil – College of Animal Science and Food Engineering, ²New Mexico State University, ³DSM Produtos Nutricionais Brasil S.A., ⁴DSM Nutritional Products

10:15 a.m. **Ruminant Nutrition Session I Break**

10:30 a.m. 393 **Beef cow antepartum glucose-insulin kinetics are altered by overfeeding metabolizable protein during late gestation and influenced by test-day relative to calving**
Koryn S. Hare¹, Greg B. Penner², Katie M. Wood³
¹Department of Animal Bioscience, University of Guelph, ²Department of Animal and Poultry Science, University of Saskatchewan, ³University of Guelph

10:45 a.m. 392 **Effects of a vitamin and mineral bolus on heifer feedlot performance, feeding behavior and carcass characteristics**

Kacie L. McCarthy¹, Sarah R. Underdahl², Carl R. Dahlen³

¹University of Nebraska-Lincoln, ²North Dakota State University, ³North Dakota State University, Department of Animal Sciences

11:00 a.m. 391 **Effects of increasing carbohydrases levels on productive performance of beef cattle fed feedlot finishing diets**

Victor Valério de Carvalho¹, Alexandre Perdigão², Tiago S. Acedo³, Guilherme S. Vasconcellos⁴, Luis Fernando Tamassia³

¹dsm-firmenich, ²DSM Nutritional Products Brazil, ³DSM Produtos Nutricionais Brasil S.A., ⁴DSM Nutritional Products

11:15 a.m. 390 **Effects of dietary-induced pH changes on feed digestion, nitrogen metabolism, fermentation, and biohydrogenation of polyunsaturated fatty acids in dual-flow continuous culture fermenters.**

Joshua M. Zeltwanger¹, Alfredo DiCostanzo², Haley Larson-Johnson³, Marshall Stern²

¹University of Missouri, ²University of Minnesota, ³Cargill Animal Nutrition

11:30 a.m. 389 **Effects of energy source on performance and carcass characteristics in Hair lambs finished in feedlot**

Roman Castañeda-Serrano¹, Fabian Gutierrez-Oviedo², Marcela Diaz-Cristancho¹, Jairo Pardo-Guzman¹, Paula Lozano-Morales¹, Cediél-Devia Diana¹

¹University of Tolima, ²

Ruminant Nutrition Session II

Chair: Christopher Reinhardt, Zinpro Corporation

9:00 AM - 11:45 AM

Meeting Room 9A

9:00 a.m. **Presentation of Award: AFIA Ruminant Nutrition Research Award**

Ricardo Ekmay¹

¹

9:05 a.m. 402 **Awardee Talk - Efficiency of nutrient use in ruminants: Current understanding and emerging questions**

Kendall C. Swanson¹

¹North Dakota State University

9:30 a.m. 401 **Effect of Zinc Source and Ractopamine Hydrochloride on the Growth Performance and Carcass Characteristics of Steers Fed in Confinement to Harvest**

John J. Wagner¹, William T. Nelson¹, Terry E. Engle¹, Jerry Spears², Jeff S. Heldt³, Scott Laudert⁴

¹Colorado State University, ²North Carolina State University, ³Micronutrients USA LLC,

⁴Private Consultant

9:45 a.m. 394 **Exploring the Relationships Between Cow-Calf Management Systems as Affected by Protein/Methionine Nutrition During Gestation on the Performance of Cow-Calf Pairs Prior to Weaning**

Kaitlyn VJ Lawson¹, Madeline M. Collins¹, Michaela K.S Lievre¹, Cheryl P. Campbell¹, Anne M. Edwards¹, John P. Cant¹, Katie M. Wood¹, Ira B. Mandell¹

¹University of Guelph

10:00 a.m. 396 **Effect of zinc amino acid complexes on growth performance and carcass characteristics of finishing beef steers fed with or without ractopamine hydrochloride- a nine study pooled analysis.**

Christopher Reinhardt¹, Allison Millican², Tryon A. Wickersham², Connie K. Larson¹, Mark E. Branine¹

¹Zinpro Corporation, ²Texas A&M University

10:15 a.m. **Ruminant Nutrition Session II Break**

10:30 a.m. 397 **Effect of Smartamine M on acute phase protein response in receiving beef heifers**

Madeline S. Grant¹, Hannah F. Speer¹, William R. Hollenbeck¹, Ross N. Wahl¹, Daniel D. Luchini², Dale A. Blasi¹, Evan C. Titgemeyer¹

¹Kansas State University, ²Adisseo

10:45 a.m. 395 **Effects of supplemental protein and yeast on fermentation of low quality forage in single-flow continuous culture fermenters.**

Joshua M. Zeltwanger¹, Allison M. Meyer¹, Eric Bailey¹, Abe Scheaffer², Kevin R. MENG¹, Derek W. Brake¹

¹University of Missouri, ²SweetPro

11:00 a.m. 399 **The 25-hydroxyvitamin D3 supplementation improves animal performance of Nellore cattle grazed in tropical grass**

Vinicius N. Gouvêa¹, Guilherme S. Vasconcellos², Tiago S. Acedo³, Luis Fernando Tamassia³

¹New Mexico State University, ²DSM Nutritional Products, ³DSM Produtos Nutricionais Brasil S.A.

11:15 a.m. 398 **Effects of protein level and supplemental methionine in late-gestation on colostrum quality and passive immunity transfer in beef cattle**

Michaela K.S Lievre¹, Madeline M. Collins¹, Kaitlyn VJ Lawson¹, Douglas C. Hodgins¹, John P. Cant¹, Ira B. Mandell¹, Katie M. Wood¹

¹University of Guelph

11:30 a.m. 400 **Relationship between fecal microbiota and enteral methane emissions of dairy cows**

Jan C. Plaizier¹, Allan Kotz², Khafipour Khafipour²

¹University of Manitoba, ²University of Manitoba

Teaching/Undergraduate and Graduate Education Session

Chair: Lily Edwards-Callaway, Department of Animal Sciences, Colorado State University

9:00 AM - 11:45 AM

Meeting Room 12A

9:00 a.m. **Presentation of Award: Distinguished Teacher Award**

Emily Otto-Tice ¹

¹Purina Animal Nutrition

9:05 a.m. 425 **Awardee Talk: Does Your Classroom have 4 Walls**

Robert J. Coleman ¹

¹University of Kentucky

9:30 a.m. 418 **Student reflections after completing a meat science course**

Stanley F. Kelley ¹, Marcy M. Beverly ¹, Mark Anderson ¹

¹Sam Houston State University

9:45 a.m. 421 **Addressing the diverse needs and career interests of animal sciences undergraduate students in a career preparations course**

Karol E. Fike ¹

¹Kansas State University

10:00 a.m. 419 **Academic performance and views toward community service from students engaged in service learning through a beef production course**

William B. Smith ¹

¹Tarleton State University

10:15 a.m. 422 **Developing foundational courses to support undergraduate student success in animal science departmental core curriculum**

Kathrin Dunlap ¹, Lonisa Early ¹, Debra Fowler ¹, Tryon A. Wickersham ¹

¹Texas A&M University

10:30 a.m. **Undergraduate and Graduate Education Session Break**

10:45 a.m. 424 **Do Classroom Assessment Techniques Improve Student Learning in an Introduction to Animal Science Laboratory Course?**

Amy Abrams ¹, Katelyn Zeamer ¹, Rosemarie Nold ¹, Michael Gonda ¹

¹South Dakota State University

11:00 a.m. 423 **What's the Beef with Communication? Investigating Communication Styles of Advanced Animal Science Students**

Shannon L. Norris ¹, Holli Leggette ¹, Hanna Siptak ¹, Andy D. Herring ¹, Theresa Murphrey ¹

¹Texas A&M University

11:15 a.m. 427 **Creating experiential learning through roundtable discussion and debate exercises in an animals and society course**

Don R. Mulvaney ¹

¹Auburn University

11:30 a.m. 420 **Case study: Educational outreach as a component of graduate education**

Megan K. Galvin ¹, William B. Smith ²

¹Department of Animal Science and Veterinary Technology, Tarleton State University,

²Tarleton State University

Forages and Pastures Symposium

Chair: Travis Whitney, TX A&M AgriLife Research; Juan Villalba, Utah State University

9:00 AM - 12:00 PM

Meeting Room 9C

9:00 a.m. 447 **A multifaceted and interdisciplinary approach to producing functional foods**

Travis R. Whitney ¹

¹Texas A&M AgriLife Research

9:10 a.m. 441 **Plant secondary compounds to enhance livestock production efficiency**

byeng ryel min ¹

¹PH.D.

9:35 a.m. 445 **Opportunities to integrate plant secondary compounds into beef cattle feedlot diets**

Eric Bailey ¹

¹University of Missouri

10:00 a.m. 442 **Understanding and overcoming research bias regarding the toxicity of condensed tannins and terpenoids in ruminant livestock diets**

Travis R. Whitney ¹

¹Texas A&M AgriLife Research

10:25 a.m. 444 **Plant secondary compounds and milk production and dairy products**

Rachael G. Christensen ¹

¹USDA ARS Northern Great Plains Lab Mandan, ND

10:50 a.m. 446 **Using diets that contain secondary compounds to produce functional food meat products**

Chris R. Kerth ¹, Kayley R. Wall ²

¹Texas A&M University, ²Texas A&M University, Department of Animal Science

11:15 a.m. 443 **Functional foods research in human nutrition**

Stephen Talcott ¹

¹

11:40 a.m. **Forages and Pastures Symposium Discussion**

Nonruminant Nutrition Session V: Feeding Technology

Chair: Shengfa Liao, Mississippi State University

9:00 AM - 12:15 PM

Meeting Room 12B

9:00 a.m. **Presentation of Award: Equine Science Award**

Jason R. Russell ¹

¹Zinpro Corporation

9:05 a.m. 352 **Feeding treated wheat straw to weaned pigs improves feed efficiency and impacts mucosal and system immune parameters**

Jaron R. Lewton ¹, Medhat A. Michael ², Mrigendra Rajput ³, Kyan M. Thelen ⁴, Adam J. Moeser ⁴, Dale W. Rozeboom ¹

¹Department of Animal Science, Michigan State University, ²Ministry of Agriculture, Egypt,

³Department of Biological Sciences, Arkansas Tech University, ⁴Department of Large Animal Clinical Sciences, College of Veterinary Medicine, Michigan State University

9:20 a.m. 354 **Dietary Supplementation with Fermented Mixed Feed Improves Growth Performance and Meat Quality in Finishing Pigs**

Lihong Hao ¹, Zeqing Lu ²

¹Nutrition and Feed Science of Zhejiang Province, Institute of Feed Science, Zhejiang University,, ²Key Laboratory of Animal Nutrition and Feed Science of Zhejiang Province, Institute of Feed Science, Zhejiang University,

9:35 a.m. 358 **Effects of fermented feed supplementation on pig growth performance: A meta-analysis**

Bocheng Xu ¹, Zhi Li ¹, Zeqing Lu ¹, Yizhen Wang ¹

¹Institute of Feed Science, Zhejiang University

9:50 a.m. 355 **Growth performance, organ weights, thyroid hormone levels, and hindgut pH of nursery pigs fed diets containing cold-pressed canola cake without or with resistant starch**

Jung Wook Lee ¹, Tofuko A. Woyengo ²

¹South Dakota State University, ²Assistant professor

10:05 a.m. **Nonruminant Nutrition Session V: Feeding Technology Break**

10:15 a.m. 361 **Porcine in vitro degradation and fermentation characteristics of heat pretreated corn whole stillage**

Kevin S. Jerez-Bogota ¹, Tofuko A. Woyengo ², William Gibbons ³

¹South Dakota State University, ²Assistant professor, ³Associate Dean for Research

10:30 a.m. 353 **Starch to fat ratio in piglet nutrition**

Tolulope O. Adebawale ¹, Kang Yao ², Yulong Yin ³

¹University of Chinese Academy of Sciences, Institute of Subtropical Agriculture, China.

Crescent University Abeokuta, Nigeria., ²University of Chinese Academy of Sciences,

³Institute of Subtropical Agriculture, Chinese Academy of Science

10:45 a.m. 356 **Meal Feeding Compared with Continuous Feeding Enhances Insulin and Amino Acid Signaling to Translation Initiation in Skeletal Muscle of Pigs**

Teresa A. Davis ¹, Samer El-Kadi ², Agus Suryawan ¹, Marta Fiorotto ¹

¹USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine, ²Virginia Tech

11:00 a.m. 359 **Occurrence of Mycotoxins in 2018 US Corn-based Feed Ingredients**

Paige N. Gott ¹, Erika G. Hendel ², Shelby M. Curry ², Ursula Hofstetter ³, G. Raj Murugesan ²

¹BIOMIN America Inc., ²BIOMIN America Inc, ³BIOMIN Holding GmbH

11:15 a.m. 351 **Evaluation of varying levels of a nutritional water supplement on growth performance of nursery pigs fed complex diets without antibiotics**

Afton Sawyer ¹, Scott Carter ¹, Pornpim Aparachita ¹, Jared Harshman ¹, Megan Bible ², Fredrik Sandberg ²

¹Oklahoma State University, ²Furst-McNess Company

11:30 a.m. 357 **Bridging the gap between reality and genetic potential in pig performance by nutritional strategies**

Daiwen Chen ¹, Ping Zheng ¹, Iianqiang che ¹, Bing Yu ¹

¹Sichuan Agricultural University

11:45 a.m. 360 **Awardee Talk - Weight Loss Strategies in Horses**

Shannon E. Pratt-Phillips ¹

¹North Carolina State University

**Companion Animal Symposium IV: Companion Animal Teaching Symposium:
Incorporating Companion Animals into an Animal Science Curriculum**

Chair: Maria R. C. de Godoy, Department of Animal Sciences and Division of Nutritional Sciences, University of Illinois at Urbana-Champaign

9:30 AM - 12:30 PM

Meeting Room 10A/B

9:30 a.m. **Companion Animal Symposium IV Introduction**

9:45 a.m. 336 **Integration of Teaching and Extension of Companion Animal Biology and Nutrition**

Lisa Karr ¹

¹UNL

10:15 a.m. 337 **Companion Animals Outside the Classroom: An Overview of Experiential Learning Opportunities**

Sarah Albert ¹

¹University of Illinois at Urbana-Champaign

10:45 a.m. **Companion Animal Symposium IV Break**

11:00 a.m. 338 **An employer perspective: What are Employers Looking for in Terms of Companion Animal Knowledge**

Gary M. Davenport ¹

¹Archer Daniels Midland Company

11:30 a.m. 339 **Challenges and Opportunities in Developing a Companion Animal Nutrition Curriculum for Veterinary Students**

Susanna E. Kitts-Morgan ¹, Catherine Lenox ², Dawn M. Spangler ¹

¹Lincoln Memorial University, ²Royal Canin

12:00 p.m. **Companion Animal Symposium IV Q&A**

Exhibitor Move-out

12:00 PM - 6:00 PM

Ballroom D

Poster Session XIII

12:00 PM - 1:00 PM

Ballroom D

12:00 p.m. PSXIII-8 **Acute challenge with a DON-contaminated diet induce transient changes on microbiota composition in finishing pigs**

Mathilde Le Sciellour ¹, Olivier Zemb ², David Renaudeau ¹

¹PEGASE, INRA, Agrocampus-Ouest, ²GenPhySE, Université de Toulouse, INRA, INPT, INP-ENVT

12:00 p.m. PSXIII-1 **Age-related changes in the ratio of different spermatogonia types in the seminiferous tubules of quail testes**

Evgeniya K. Tomgorova ¹, Natalia A. Volkova ¹, Anastasia N. Vetokh ¹, Inna P. Novgorodova ¹, Ludmila A. Volkova ¹, Natalia Anatolievna Zinovieva ²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry

12:00 p.m. PSXIII-37 **Alteration of mRNA abundance of the oxidizing factors-related genes during the transition period in dromedary camel**

Mousa Zarrin ¹, Rachael Christensen ², S. Kazem DoostMohammadi ³, Ahmadali Ahmadpour ⁴, Amir Ahmadpour ⁵

¹Yasouj University, ²United States Department of Agriculture, ³SabzBavaran-e-NouAndish, ⁴Fars-IRIB, ⁵Utah State University

12:00 p.m. PSXIII-11 **Altering length of the presynchronization period in a long-term progestin-based estrus synchronization protocol for timed artificial insemination of beef heifers**

Emma R. Knickmeyer ¹, Jordan M. Thomas ², James William C. Locke ¹, Rachael C. Bonacker ¹, Lauren Ciernia ², Jaclyn N. Ketchum ¹, Mark R. Ellersieck ³, Scott E. Poock ², Michael F. Smith ², David J. Patterson ²

¹University of Missouri - Columbia, ²University of Missouri, ³University of Missouri

12:00 p.m. PSXIII-30 **Analysis of gene expression profiles in liver and muscle tissue of pigs divergent in feed efficiency**

Stafford Vigors¹, Torres Sweeney¹

¹University College Dublin

12:00 p.m. PSXIII-26 **Are consumers' culinary skills related to their purchasing attitudes towards pork?**

Imma Argemí-Armengol¹, Daniel Villalba¹, Guillermo Ripoll², Alfredo Teixeira³, María Ángeles Latorre⁴, Javier Álvarez-Rodríguez¹

¹Universitat de Lleida. Departament de Ciència Animal, ²IA2-CITA de Aragón, ³Escola Superior Agrária. Instituto Politécnico de Bragança-Centro de Investigação de Montanha (CIMO), ⁴Universidad de Zaragoza

12:00 p.m. PSXIII-9 **Can we predict feed efficiency using fecal microbiota information?**

Mathilde Le Sciellour¹, Sébastien Dejean², David Renaudeau¹, Olivier Zemb³

¹PEGASE, INRA, Agrocampus-Ouest, ²Institut de Mathématiques de Toulouse, UMR 5219, Université de Toulouse, CNRS, UPS, ³GenPhySE, Université de Toulouse, INRA, INPT, INP-ENVT

12:00 p.m. PSXIII-21 **Changes of Blood Biochemical Parameters of Chinese Holstein Cows in Different Seasons**

Lirong hu¹, Jinhuan Dou², Gang Guo³, Qing Xu⁴, Yachun Wang¹

¹College of Animal Science and Technology, China Agricultural University, ²Laboratory of Animal Genetics, Breeding and Reproduction, Ministry of Agriculture of China, National Engineering Laboratory of Animal Breeding, College of Animal Science and Technology, China Agricultural University, ³Beijing Sunlon Livestock Development Company Limited, ⁴College of Life Sciences and Bioengineering, Beijing Jiaotong University

12:00 p.m. PSXIII-25 **Comparative analysis of state of the neurosecretory system of pink salmon, *oncorhynchus gorbuscha walb.* on different stages of ontogenesis**

Daniil Tashbaev¹, Marina Mosyagina¹, Julia Lukina¹, Alla Pechenkina¹, Polina Anipchenko², Pavel Garlov³, Oleg Zelennikov⁴

¹Saint-Petersburg State Academy of Veterinary Medicine, ²St. Petersburg State University of Veterinary Medicine, ³Saint-Petersburg State Agrarian University, ⁴Saint-Petersburg State University

12:00 p.m. PSXIII-16 **Comparison of models for prediction of pig body weight using features from an autonomous 3D computer vision system**

Arthur Fernandes¹, Joao R. R. Dorea², Robert Fitzgerald³, Willian O. Herring⁴

¹Cobb-Vantress, ²University of Wisconsin-Madison, ³Genus PLC, ⁴Genus PIC

12:00 p.m. PSXIII-13 **Comparison of Telomere Length in Age-Matched Primiparous and Multiparous Brahman Cows**

Sydney E. O'Daniel¹, David G. Riley², Kelli J. Kochan¹, Penny K. Riggs², Monte M. Rouquette³, Ronald D. Randel⁴, Thomas H. Welsh¹

¹Department of Animal Science, Texas A&M University, and Texas A&M AgriLife Research, ²Texas A&M University, ³Texas A&M AgriLife Research, ⁴Texas A&M AgriLife Research, Overton, TX

12:00 p.m. PSXIII-18 **Conceptus stimuli in peripheral blood mono and polymorphonuclear cells at the beginning of pregnancy**

Gabriela Dalmaso de Melo ¹, Igor Garcia Motta ¹, Cecilia Constantino Rocha ¹, Angela Maria Gonella Diaza ², Juliano Coelho da Silveira ³, Mario Binelli ², Ky G. Pohler ⁴, Guilherme Pugliesi ⁵

¹Department of Animal Reproduction - University of São Paulo, ²University of Florida, ³Department of Veterinary Medicine - University of São Paulo, ⁴Texas A&M University, ⁵University of Sao Paulo

12:00 p.m. PSXIII-2 **Cryopreservation effect on biological parameters of poultry semen**

Mikhail A. Zhilinsky ¹, Evgeniya K. Tomgorova ¹, Baylar S. Iolchiev ¹, Anastasia N. Vetokh ¹, Hanum V. Ashraf ¹, Natalia A. Volkova ¹, Natalia Anatolievna Zinovieva ², Vugar A. Bagirov ²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry

12:00 p.m. PSXIII-10 **Dietary forsythia suspensa extract supplementation improves reproductive performance, antioxidant status and immune function in lactating sows and suckling piglets**

Shenfei Long ¹, Tengfei He ², Di Wu ³, Xiangshu Piao ¹

¹College of Animal Science and Technology, China Agricultural University, ²College of Animal Science and Technology, China Agricultural University, ³College of Animal Science, China Agricultural University

12:00 p.m. PSXIII-23 **Dietary Glutamine, Glutamate, and Aspartate Supplementation Improves Morphology and Intercellular Junction of Small Intestine in Piglets**

Jing Wang ¹, BI E TAN ², Jianjun Li ³, Ming Qi ⁴, Wenkai Ren ⁴, Yulong Yin ⁵

¹Hunan normal university, ²University of California davis, ³institute of subtropical agriculture, ⁴institute of subtropical agriculture, University of Chinese Academy of Sciences, ⁵Institute of Subtropical Agriculture, Chinese Academy of Science

12:00 p.m. PSXIII-24 **Effect of wet versus dry feeding on digestibility, growing performance, carcass composition, and meat eating quality of finishing pigs**

Néstor Arce Vázquez ¹, Estela Garza Brenner ²

¹Universidad Autónoma de Baja California, ²Universidad Autónoma de Nuevo León

12:00 p.m. PSXIII-28 **Effects of Actigen in antibiotics-free diets on growth performance, intestinal barrier functions and inflammation in weaned piglets**

Min Song ¹, Yijie Fan ¹, Han Su ¹, Fenglin Zhang ¹, Fangfang Liu ¹, Xiaoyan Zhu ², Lina Wang ¹, Ping Gao ¹, Zhonggang Wang ³, Gang lin ⁴, yan xue ⁴, Qingyan Jiang ¹, Songbo Wang ⁵

¹South China Agricultural University, ²Northwest A&F University, ³Guangdong Huahong Farming and Husbandry Group Co., Ltd., ⁴Beijing Alltech Biological Products Co. Limited, ⁵College of Animal Science, South China Agricultural University

12:00 p.m. PSXIII-7 **Effects of high fat diets on metabolic parameters and markers of colonic permeability in dogs.**

Alex Moinard ¹, John Flanagan ², Agnès André ¹, Khadija Ouguerram ³, Patrick Nguyen ¹, Véronique Leray ¹

¹NP3, Nutrition, PhysioPathology and Pharmacology Unit, 2017.B146, ²Royal Canin,

³Physiopathology of Nutritional Adaptations Unit

12:00 p.m. PSXIII-19 **Effects of injectable trace mineral supplements at the initiation of estrus synchronization on pregnancy rates in beef cows**

Carl R. Dahlen ¹, Kacie L. McCarthy ², Sarah R. Underdahl ³, Mellissa Crosswhite ⁴, Bryan W. Neville ⁵

¹North Dakota State University, Department of Animal Sciences, ²University of Nebraska-Lincoln, ³North Dakota State University, ⁴Oklahoma State University, ⁵USDA, ARS, U.S. Meat Animal Research Center

12:00 p.m. PSXIII-32 **Effects of rumen-protected niacin on dry mater intake, rumination, and milk production in multiparous Holstein dairy cow during transition period**

Naren Gaowa ¹, Erdan Wang ², Shengli Li ³, Zhijun Cao ⁴, Yachun Wang ², Jun Zhang ⁵, Yajing Wang ¹

¹State Key Laboratory of Animal Nutrition, Beijing Engineering Technology, Research Center of Raw Milk Quality and Safety Control, College of Animal Science and Technology, China Agricultural University, ²College of Animal Science and Technology, China Agricultural University, ³China Agricultural University, ⁴State Key Laboratory of Animal Nutrition, College of Animal Science and Technology, China Agricultural University, ⁵China Agriculture University

12:00 p.m. PSXIII-12 **Evaluation of split-time artificial insemination following administration of the 7-d CO-Synch + CIDR® estrus synchronization protocol in beef heifers**

Emma R. Knickmeyer ¹, Jordan M. Thomas ², James William C. Locke ¹, Rachael C. Bonacker ¹, Mark R. Eilersieck ³, Scott E. Pooch ², Michael F. Smith ², David J. Patterson ²

¹University of Missouri - Columbia, ²University of Missouri, ³University of Missouri

12:00 p.m. PSXIII-29 **Farm of origin has a major influence on the colonic microbiome but alterations due to selection for feed efficiency are also evident**

Stafford Vigors ¹, Torres Sweeney ¹

¹University College Dublin

12:00 p.m. PSXIII-6 **Fat deposition in castrated pigs for production of dry-cured ham: Evaluation of nutritional and genetic strategies**

Pau Aymerich ¹, Encarnación Jiménez-Moreno ², Jordi Bonet ¹, Domingo Carrión ², Jaume Coma ¹

¹Vall Companys Group, ²Cargill Animal Nutrition

12:00 p.m. PSXIII-41 **Fibroblast growth factor 21 promotes lipid oxidation and transportation while inhibits lipogenesis via AMP-activated protein kinase signaling pathway in bovine hepatocytes**

Jianguo Wang ¹, Xiaoyan Zhu ¹, Baoyu Zhao ¹
¹Northwest A&F University

12:00 p.m. PSXIII-38 **Hepatic reducing factors expression changes in dromedary camel during late gestation and early lactation**

Mousa Zarrin ¹, Rachael Christensen ², S. Kazem DoostMohammadi ³, Ahmadali Ahmadpour ⁴, Amir Ahmadpour ⁵
¹Yasouj University, ²United States Department of Agriculture, ³SabzBavaran-e-NouAndish, ⁴Fars-IRIB, ⁵Utah State University

12:00 p.m. PSXIII-31 **Hypothalamic and Pituitary Responses to Resistin in Sheep: Integration of Resistin and Leptin Signaling involving SOCS-3 and LepRb.**

Dorota A. Zieba ¹, Weronika Biernat ¹, Malgorzata Szczesna ¹, Katarzyna Kirsz ¹, Tomasz Misztal ²
¹H. Kollataj Agricultural University, ²Kielanowski Institute of Animal Physiology and Nutrition, Polish Academy of Sciences

12:00 p.m. PSXIII-17 **Impact of Ambitine® Feed Additive on late finishing pig growth performance: A meta-analysis**

Benjamin Bass ¹, Stacie Crowder ², Murali Raghavendra Rao ³
¹Land O'Lakes, ²PMI Additives, ³Purina Animal Nutrition

12:00 p.m. PSXIII-34 **Late-Breaking: The influence of Nellore cattle supplementation during the growing phase on pasture with urea (high or low) and with or without tannin extracts on the performance, ruminal fermentation and blood parameters**

Iorrano A. A. Cidrini ¹, Laura Franco Prados ², Willian Foresto ³, Eduarda Mariano ³, William Souza ⁴, Gustavo R Siqueira ⁵, Flavio D Resende ⁵
¹Montana State University, ²APTA, ³Unifeb Barretos - APTA Colina, SP, ⁴Unesp Jaboticabal - APTA Colina, SP, ⁵UNESP - Universidade Estadual Paulista and APTA - Agência Paulista de Tecnologia dos Agronegócios

12:00 p.m. PSXIII-20 **Low birth weight pigs gain muscle more efficiently than normal birth weight pigs when limit-fed sow milk replacer formula**

Joseph Yonke ¹, Kacie Seymour ¹
¹Virginia Tech

12:00 p.m. PSXIII-3 **Maternal eicosapentaenoic acid feeding decreases placental and fetal lipid deposition and improves antioxidant capacity through a Sirtuin-1 independent**

Jie Peng ¹, Jian Peng ¹
¹Huazhong Agricultural University

12:00 p.m. PSXIII-27 **Meat and fat quality of gilts intended for Spanish dry-cured ham: effect of immunocastration and feeding**

Leticia Pérez-Ciria ¹, Francisco Javier Miana-Mena ¹, Guillermo Ripoll ², María Ángeles Latorre ³

¹IA2-Universidad de Zaragoza, ²IA2-CITA de Aragón, ³Universidad de Zaragoza

12:00 p.m. PSXIII-22 **Modeling the optimal time point at which to perform timed artificial insemination**

Jordan M. Thomas ¹, William R. Lamberson ¹, John B. Hall ²

¹University of Missouri, ²University of Idaho

12:00 p.m. PSXIII-39 **Onset of ovulation in suckled cows treated with progesterone and estradiol benzoate**

Giovanni M. Baez ¹, Wilfran E. Rivera ¹

¹Universidad Francisco de Paula Santander

12:00 p.m. PSXIII-42 **Plasma levels of growth hormone in laying hens in relation to developmental and hormonal factors**

Araksiya A. Smekalova ¹, Irina Y. Lebedeva ², Nahid Parvizi ³, Roland Grossmann ³

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²L.K. Ernst Federal Science Center for Animal Husbandry, ³Institute of Farm Animal Genetics, FLI, Germany

12:00 p.m. PSXIII-33 **Polyunsaturated fatty acid and their fetal programming effect on the FFARs from ewe lambs' ovaries**

Ana Carranza Martin ¹, Alejandro E. Relling ²

¹CONICET, ²The Ohio State University

12:00 p.m. PSXIII-35 **Relationship between early gestation maternal plasma progesterone concentrations and within-litter birth weight variation from Yorkshire sired litters**

Jeremy Miles ¹, Lea A. Rempel ², Robert Cushman ³, Clay Lents ¹

¹USDA, ²USDA, ARS, USMARC, ³USDA, ARS, U.S. Meat Animal Research Center

12:00 p.m. PSXIII-4 **Species feature of morphometric parameters in poultry semen**

Vugar A. Bagirov ¹, Anastasia N. Vetokh ², Mikhail A. Zhilinsky ², Hanum V. Ashraf ², Evgeniya K. Tomgorova ², Natalia A. Volkova ², Natalia Anatolievna Zinovieva ¹, Baylar S. Iolchiev ²

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²L.K. Ernst Federal Science Center for Animal Husbandry

12:00 p.m. PSXIII-40 **Superovulation and oocyte recovery rates in CIDR synchronized goats treated with PGF2 α , FSH and GnRH during breeding season**

Mahipal Singh ¹, Ki-Eun Park ², William Tyler ¹, George McCommon ¹, Telugu Bhanu ³, Miranda Knight ¹, Ann Gillespie ¹, Ma Xiaoling ⁴, Ann Powel ⁵, David Donovan ⁵, Timothy Ramsay ⁶

¹Fort Valley State University, ²University of Maryland, ³university of Maryland, ⁴Animal Science Program, College of Agriculture, Family Sciences, and Technology, Fort Valley State University,, ⁵ARS-USDA, ⁶ars-usda

12:00 p.m. PSXIII-5 **The age dynamics of the spermatogenic cells development in the roosters' testes**

Anastasia N. Vetokh ¹, Natalia A. Volkova ¹, Evgeniya K. Tomgorova ¹, Ludmila A. Volkova ¹, Natalia Anatolievna Zinovieva ²

¹L.K. Ernst Federal Science Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry

12:00 p.m. PSXIII-14 **The impact of estrus intensity on variables associated with fertility in Bos taurus-influenced beef cows**

Reinaldo F. Cooke ¹, Nicky Oosthuizen ², Kelsey Schubach ¹, Alice P. Brandão ¹, Ramiro V. Oliveira ¹, Eduardo Colombo ¹, Ky G. Pohler ¹

¹Texas A&M University, ²ABS Global

12:00 p.m. PSXIII-36 **The inflammatory response in cellular level changes during the transition period in dromedary camel**

Mousa Zarrin ¹, Rachael Christensen ², S. Kazem DoostMohammadi ³, Ahmadali Ahmadpour ⁴, Amir Ahmadpour ⁵

¹Yasouj University, ²United States Department of Agriculture, ³SabzBavaran-e-NouAndish, ⁴Fars-IRIB, ⁵Utah State University

12:00 p.m. PSXIII-15 **Thyroid and biochemical profiles during the prepartum and postpartum periods in the blood of primiparous dairy cows with various reproductive abilities**

Elena K. Montvila ¹, Olga S. Mityashova ², Aleksey Solomakhin ³, Nadezhda V. Bogolyubova ¹, Olga V. Aleynikova ², Irina Y. Lebedeva ⁴

¹L.K. Ernst Federal Research Center for Animal Husbandry, ²L.K. Ernst Federal Research Center for Animal Husbandry, Podolsk, Russia, ³L.K. Ernst Federal Science Center for Animal Husbandry, Podolsk, Russia, ⁴L.K. Ernst Federal Science Center for Animal Husbandry

Poster Session XIV

1:00 PM - 2:00 PM

Ballroom D

1:00 p.m. PSXIV-37 **Assessment of milk yield, milk composition and urea nitrogen in milk and plasma in lactating buffaloes fed diets with increasing levels of corn plus urea**

Valdi Lima Júnior ¹, Tobias Tobit De Barros Melo ², Viviany Lúcia Fernandes Dos Santos ², Leilson R. Bezerra ³, Marcelo Andrade Ferreira ⁴, Michelle Parente ⁵, Migson Santos Menezes ⁶, LUANA ANDRESSA DA COSTA SILVA ⁶

¹Universidade Federal do Rio Grande do Norte, ²UFPI, ³Professor, ⁴UFRPE, ⁵Universidade Federal do Maranhão, ⁶UFRN

1:00 p.m. PSXIV-25 **Carcass characteristics from hair lambs fed with different energy supplementation strategies**

Roman Castañeda-Serrano ¹, Paula Lozano-Morales ¹, Fabian Gutierrez-Oviedo ², Karol Ramirez-Castilla ³

¹University of Tolima, ², ³University of Tolima

1:00 p.m. PSXIV-23 **Characterization of microbial communities associated with the rumen lining, digesta and rumen fluid from beef cattle consuming a high energy diet using 16S rRNA gene amplicon sequencing**

Arquimides Reyes ¹, Margaret Weinroth ¹, Cory Wolfe ¹, Robert J. Delmore ¹, Terry E. Engle ¹, Paul Morley ¹, Keith Belk ²

¹Colorado State University, ²Colorado State University, Department of Animal Sciences

1:00 p.m. PSXIV-16 **Comparative in vitro effects of spray-dried and freshly-harvested Paenibacillus fortis strain 79R4 on rumen methane, nitrate, nitrite and ammonia metabolism**

MONSERRATH FELIX-PORTILLO ¹, Elizabeth Latham ², Ruth Lisbeth Armendariz-Rivas ³, Jaime Salinas-Chavira ⁴, CLAUDIO ARZOLA-ALVAREZ ⁵, Robin Anderson ⁶

¹Universidad Autónoma de Chihuahua, ²Bezoar Laboratories ACC, ³U A Ch, ⁴Universidad Autónoma de Tamaulipas, ⁵UNIVERSIDAD AUTONOMA DE CHIHUAHUA, ⁶ARS/USDA

1:00 p.m. PSXIV-30 **Effect of aggressive growth promotant strategy on head dimensions of Jersey steers**

Kimberly B. Cooper ¹, Tylo J. Kirkpatrick ¹, Sierra L. Pillmore ², Travis C. Tennant ², Ty E. Lawrence ²

¹Beef Carcass Research Center - West Texas A&M University, ²West Texas A&M University

1:00 p.m. PSXIV-19 **Effect of alpha-lipoic acid on productive parameters and ruminal VFA profile in sheep**

Carolina Robles-Rodriguez ¹, Laura González Dávalos ¹, Ofelia Mora ², Yesmin hermanadez ³, Armando Shimada ¹, Enrique Piña Garza ⁴

¹UNAM, ²Lab RuMeN- FESC, UNAM, ³FMVZ,UNAM, ⁴Fac. Med. UNAM

1:00 p.m. PSXIV-36 **Effect of corn variety and amylase enzyme on cattle performance and carcass characteristics**

Renan Regatieri Casagrande ¹, Terry E. Engle ¹, John J. Wagner ¹

¹Colorado State University

1:00 p.m. PSXIV-26 **Effect of effective microorganisms (EM®) and milk whey or molasses on in vitro digestibility of corn stover silage**

Manuel Pérez-Pérez ¹, Claudia Marquez-Mota ², Francisco Castrejón-Pineda ³, Laura Vallejo-Hernández ⁴, Águeda García-Pérez ⁵, Atmir Romero-Pérez ⁶, Luis Corona ⁶

¹Universidad Nacional Autónoma de México, ²Universidad Nacional Autónoma de México.FMVZ.UNAM., ³Universidad Nacional Autónoma de México.FMVZ, ⁴Universidad Autónoma de Chapingo, ⁵FMVZ, UNAM, ⁶Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.

1:00 p.m. PSXIV-21 **Effect of high-tannin sorghum grain on rumen fermentation and methane production in vitro**

Adolfo Raramuri Méndez-Sánchez ¹, Karen A. Beauchemin ², Luis Corona ³, Claudia Cecilia Márquez-Mota ⁴, Atmir Romero-Pérez ³

¹Universidad Nacional Autónoma de México, ²Agriculture and Agri-Food Canada, ³Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México., ⁴FMVZ, UNAM

1:00 p.m. PSXIV-9 **Effect of monensin, a blend of essential oils and Lithothamnium calcareum over two racial groups in finishing cattle diets**

Pedro Guerreiro ¹, Murilo A. Meschiatti ², Ludmila de Souza Monteiro ³, Vinícius Gouvêa ⁴, Flavio Santos ⁵

¹University of São Paulo - "Luiz de Queiroz" College of Agriculture, ²Inpasa Brasil, ³"Luiz de Queiroz" College of Agriculture, University of São Paulo, ⁴IFAS - Range Cattle Research and Education Center, University of Florida, ⁵"Luiz de Queiroz" College of Agriculture, University of São Paulo, Piracicaba, São Paulo, Brazil

1:00 p.m. PSXIV-13 **Effect of phytochemicals on in vitro rumen fermentation and methane production**

Aarón Alejandro A. Molho-Ortiz ¹, Atmir Romero-Pérez ¹, Efren Ramírez-Briebesca ², Claudia Marquez-Mota ³, Juan Carlos Ramírez-Orejel ⁴, Luis Corona ¹

¹Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México., ²Colegio de Posgraduados, ³Universidad Nacional Autónoma de México.FMVZ.UNAM., ⁴Universidad Nacional Autónoma de México-FMVZ

1:00 p.m. PSXIV-12 **Effect of the addition of canola oil on digestibility, rumen fermentation and methane emissions in beef cattle in the Mexican tropic**

Jonathan Aviles-Nieto ¹, Claudia Marquez-Mota ², Atmir Romero-Pérez ³, José Moisés Talamantes-Gómez ³, Epigmenio Castillo-Gallegos ⁴, Jesus Jarillo ⁵, Luis Corona ³

¹Universidad Nacional Autónoma de México.FMVZ.DNAB, ²Universidad Nacional Autónoma de México.FMVZ.UNAM., ³Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México., ⁴Unioversidad Nacional Autónoma de México. FMVZ. CEIEGT, ⁵Universidad Nacional Autónoma de México. FMVZ.CEIEGT

1:00 p.m. PSXIV-31 **Effects of bovine maternal nutrient restriction on offspring microRNA and messengerRNA expression and muscle fiber type**

Nikole E. Ineck ¹, Kerry Rood ¹, Jerrad F. Legako ², Shelby Quarnberg ³, Rachael Christensen ⁴

¹Utah State University, ²Texas Tech University, Department of Animal and Food Sciences, ³b Nutrition, Dietetics and Food Science, Utah State University, Logan, Utah, 84322, ⁴United States Department of Agriculture

1:00 p.m. PSXIV-17 **Effects of corn bran plus solubles and corn oil on growth performance and carcass traits of finishing bulls**

Arquimedes Lima Junior ¹, Murilo A. Meschiatti ², Vinicius N. Gouvêa ³, Victor Dantas ¹, Daniel Silva Antonelo ⁴, Raíssa Escobar ¹, Gabriel Barbosa ¹, João Paulo Mendonça ¹, Mathews Silva ¹, Jim C. MacDonald ⁵, Flavio Santos ¹

¹"Luiz de Queiroz" College of Agriculture, University of São Paulo, Piracicaba, São Paulo, Brazil, ²Inpasa Brasil, ³New Mexico State University, ⁴College of Animal Science and Food Engineering, University of São Paulo, ⁵University of Nebraska- Lincoln

1:00 p.m. PSXIV-1 **Effects of passage rate on forage intake and digestion in beef cattle**

Thomas G. Jennings ¹, Angela R. Green-Miller ²

¹Texas Tech University, ²University of Illinois

1:00 p.m. PSXIV-20 **Effects of *Saccharomyces cerevisiae* CNCM I-1077 on growth efficiency, feeding behavior, physiology, and carcass quality of yearling steers fed a high-grain diet.**

Lydia R. Forehand¹, William Kayser¹, Gordon E. Carstens¹, Eric Chevaux²

¹Texas A&M University, ²Lallemand SAS

1:00 p.m. PSXIV-34 **Encapsulated Nitrate on Performance of growing Nelore bulls under Grazing System during the Dry Season**

Cibelle Borges Figueiredo¹, Mauricia B. Silva², Juliano José De Resende Fernandes¹, Alana M. Calaça², Higor Rocha², Guilherme F. Berti², Rafael C. Araujo³, Victor R. Couto¹

¹Universidade Federal de Goiás, ²Universidade Federal de Goias, ³GRASP

1:00 p.m. PSXIV-14 **Evaluation of 21 fungal strains as pretreatment of corn stover: chemical composition and in vitro digestibility**

Paulina Luna Moreno¹, Hermilo Leal-Lara², Águeda García-Pérez¹, Luis Corona³, Atmir Romero-Pérez³, Claudia Cecilia Márquez-Mota¹

¹FMVZ, UNAM, ²FQ, UNAM, ³Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.

1:00 p.m. PSXIV-35 **Evaluation of a direct fed microbial in newly received, high-risk beef calves and the subsequent impact on performance and health**

Ellen M. Herring¹, Jase Ball², Beth B. Kegley³, James Turner⁴, Elizabeth Palmer², J.A. Hornsby², Jana L. Reynolds⁵, Benjamin Shoulders², Jeremy G. Powell⁵

¹University of Arkansas System Division of Agriculture Department of Animal Science,

²University of Arkansas, ³University of Arkansas Division of Agriculture, ⁴Chr. Hansen,

⁵University of Arkansas System Division of Agriculture

1:00 p.m. PSXIV-10 **Evaluation of an alternative to sodium monensin use in Nelore cattle finished on pasture with high-intake supplementation**

Ivanna M. Oliveira¹, Maxwelder S Soares², Hugo A S Issa³, Luiz F Costa e Silva⁴, Anne Koontz⁴, Gustavo R Siqueira⁵, Flavio D Resende⁵

¹FAZU, ²UNESP - Universidade Estadual Paulista, Jaboticabal, ³UNIFEB - Centro Universitário da Fundação Educacional de Barretos, ⁴Alltech, ⁵UNESP - Universidade Estadual Paulista and APTA - Agência Paulista de Tecnologia dos Agronegócios

1:00 p.m. PSXIV-3 **Expression of genes within the methionine-folate cycle are altered by glucose and one-carbon metabolite supplementation in bovine embryonic fibroblasts.**

Matthew S. Crouse¹, Joel S. Caton¹, Carl R. Dahlen², Pawel P. Borowicz¹, Alison K. Ward¹

¹North Dakota State University, ²North Dakota State University, Department of Animal Sciences

1:00 p.m. PSXIV-18 **Feeding behavior of feedlot steers fed combinations of feed additives**

Evandro Dias¹, Jhones O. Sarturi¹, Tosha opheim², Darren D. Henry¹, Carly A. Hoffmann¹, Michael D. Sandes², Danilo D. Millen³, Legrand Bouyi², markus miller², Alejandro Echeverry², Mindy Brashears², Phil Urso¹, Nadira J. Espinoza-Rock¹

¹Texas Tech University, ²Texas Tech, ³São Paulo State University (UNESP), Jaboticabal campus, Brazil

1:00 p.m. PSXIV-4 **Fetal programming effect of rumen-protected methionine on Angus-Simental heifer offspring's performance and adipogenesis, oxidative stress and DNA methylation gene expression regulation**

Sonia J. Moisés ¹, Gaston F. Alfaro ², Paul H. Walz ², Soren P. Rodning ²

¹Auburn University, Animal Science Department, ²Auburn University

1:00 p.m. PSXIV-33 **α -chaconine induces myogenesis of bovine satellite cells but less affect adipogenesis of adipocytes**

Ki Yong Chung ¹, Eun Mi Lee ², Eung Gi Kwon ³, Dong Hun Kang ², Man Hi Han ²

¹Korea National College of Agriculture and Fisheries, ²National Institute of Animal Science, ³Hanwoo Research Institute

1:00 p.m. PSXIV-24 **Immune Function and Growth Performance in Beef Calves Supplemented During Backgrounding with Live Yeast and Yeast Cell Wall in Combination with Supplemented Dams**

Reagan N. Cauble ¹, Elizabeth Palmer ¹, Jeremy G. Powell ², Matthew Cravey ³, Jana L. Reynolds ², Beth B. Kegley ⁴

¹University of Arkansas, ²University of Arkansas System Division of Agriculture, ³Phileo, ⁴University of Arkansas Division of Agriculture

1:00 p.m. PSXIV-22 **Impact of fibrolytic enzymes on performance, metabolism, and feeding behavior of feedlot cattle fed diets containing different levels and sources of roughage**

Ludmila de Souza Monteiro ¹, João Vitor Pessoa Fiório ¹, Jéssica Olivier Da Silva ¹, Daniel Silva Antonelo ², Nicola Walker ³

¹"Luiz de Queiroz" College of Agriculture, University of São Paulo, ²College of Animal Science and Food Engineering, University of São Paulo, ³ABVista

1:00 p.m. PSXIV-8 **Inclusion of byproducts derived from the process of corn ethanol production in finishing cattle diets**

Silvio Antunes ¹, Djonatan Machado ¹, Camila Delveaux Araujo Batalha ², Vinícius Gouvêa ³, Murilo A. Meschiatti ⁴, João Ventorin ¹, Daniel Antolnelo ⁵, Jim C. MacDonald ⁶, Flavio Santos ¹

¹"Luiz de Queiroz" College of Agriculture, University of São Paulo, Piracicaba, São Paulo, Brazil, ²Instituto de Zootecnia, Centro APTA Bovinos de Corte, ³IFAS - Range Cattle Research and Education Center, University of Florida, ⁴Inpasa Brasil, ⁵College of Animal Science and Food Engineering, University of São Paulo, Pirassununga, São Paulo, Brazil, ⁶University of Nebraska- Lincoln

1:00 p.m. PSXIV-29 **Influence of prerequisite courses on performance of students in an animal nutrition course: A one-year summary**

William B. Smith ¹

¹Tarleton State University

1:00 p.m. PSXIV-42 **Late-Breaking: Effects of yeast cell wall product on growth performance, immune responses, and gene expression of tight junction proteins of weaned pigs**

Hyunjin Kyoung¹, Myungwoo Cho², Hanbae Lee², Sangwoo Park¹, Joowon Kang¹, Daye Mun¹, Soyun Kim³, Dongoh Seo¹, Jeongjae Lee¹, Jeehwan Choe⁴, Minhong Song¹

¹Chungnam National University, ²EasyBio Inc., ³Chungnam National University, ⁴Korea National College of Agriculture and Fisheries

1:00 p.m. PSXIV-6 **Late-Breaking: Evaluation of the heat tolerance in Girolando cows**

Filipe A. Mendonca¹, Rodrigo Taveira¹, Victor Dos Anjos¹, Izabelle Da Silva¹, Felipe Ponte¹, Bruno Mesquita¹

¹GOIAS STATE UNIVERSITY

1:00 p.m. PSXIV-2 **Late-Breaking: The effect of nicotinamide riboside on pork loin chop color stability – a pilot study**

John M. Gonzalez¹, Chad B. Paulk², Kara Dunmire², Terry Houser², Travis O'Quinn²

¹University of Georgia, ²Kansas State University

1:00 p.m. PSXIV-15 **Metagenomic sequencing of rumen microorganisms of cattle fed a corn stover-based diet**

Laura Piña-González¹, Juan Miranda-Ríos², Rogelio Alejandro Alonso-Morales¹, Otoniel Maya³, Luis Corona⁴, Claudia Cecilia Márquez-Mota¹

¹FMVZ, UNAM, ²Instituto de Investigaciones Biomédicas, UNAM, ³Centro Nacional de Servicios de Diagnóstico en Salud Animal (CENASA), ⁴Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México.

1:00 p.m. PSXIV-32 **Oleic Acid Stimulate the Formation of Adipocyte-like Cells from Bovine Satellite Cells via G Protein Coupled Receptor 43 and CCAAT/Enhancer Binding Protein Beta.**

Jongkyoo Kim¹, Ki Yong Chung², Bradley J. Johnson³, Stephen B. Smith⁴

¹Michigan State University, ²Korea National College of Agriculture and Fisheries, ³Texas Tech University, ⁴Texas A&M University

1:00 p.m. PSXIV-28 **Performance of lambs of sheep fed diets containing narasin**

Rhaissa Garcia de Assis¹, Janaina S S. Biava², Nathalia R. Eckermann³, Thamires U. Sturion⁴, Terezinha T. de Souza⁵, Maria Fernanda Cerutti⁶, Matheus F. F. V de Paula⁷, Daniel M. Polizel⁴, Alexandre Vaz Pires², Evandro Maia M. Ferreira²

¹State University of Ponta Grossa, ²ASAS, ³ESALQ/University of São Paulo, ⁴University of Sao Paulo, ⁵UFAM/Federal University of Amazonas, ⁶Anhembi Morumbi University, ⁷State University of Goiás

1:00 p.m. PSXIV-7 **Red blood cells are a better indicator than plasma for predicting subcutaneous trans fatty acid composition in cattle**

Michael Dugan¹, David Rolland², Hushton Block³, Payam Vahmani¹

¹Agriculture and Agri-Food Canada, ²Agriculture & Agri-Food Canada, ³Agriculture and Agri-Food Canada, Lacombe, AB, Canada, T4L 1V7

1:00 p.m. PSXIV-5 **Results of external use of staphylococcal toxoid for the prevention of mastitis in cows**

Dariya Kashtanova¹, Valerii G. Skopichev², Nataliya Panova³, Polina A. Polistovskaia⁴, Anastasia A. Ignateva⁵, Svetlana V. Vasileva³, Polina Anipchenko⁶, Olga Dushenina³, Roman Vasil'ev⁷, Nina Pilaeva⁸

¹postgraduate student, ²St. Petersburg state Academy of veterinary medicine, ³Saint Petersburg State University of Veterinary Medicine, ⁴Saint-Petersburg State University of Veterinary Medicine, ⁵Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State University of Veterinary Medicine", ⁶St. Petersburg State University of Veterinary Medicine, ⁷St. Petersburg Academy of Veterinary Medicine, ⁸St. Petersburg State Academy of Veterinary Medicine

1:00 p.m. PSXIV-38 **Short-Term Adaptation of Milk Yield and Feed Efficiency to Individualized Dietary Changes**

Tanner P. Price¹, Douglas M. Liebe¹, Kristy M. Daniels¹, Robin R. White²

¹Virginia Tech, ²Virginia Tech School of Animal Sciences

1:00 p.m. PSXIV-11 **Supplementation of 25-hydroxy-vitamin-D3 and increased vitamin E as a strategy to increase carcass weight of feedlot beef cattle**

Victor Valério de Carvalho¹, Alexandre Perdigão²

¹dsm-firmenich, ²DSM Nutritional Products Brazil

1:00 p.m. PSXIV-39 **Use of flomoxacin, narasin e salinomycin on performance of Nellore yearling bulls fed with high forage diets**

Arnaldo C. Limede¹, Daniel M. Polizel¹, Alexandre A. Miszura¹, André S. Martins¹, José P. R. Barroso¹, Gabriela B. Oliveira¹, Lairana A. Sardinha¹, Marcelo Baggio¹, Rodrigo S. Marques², Alexandre Vaz Pires³

¹University of Sao Paulo, ²Elanco, ³ASAS

1:00 p.m. PSXIV-27 **Use of narasin in diets for lactating ewes**

Rhaissa Garcia de Assis¹, Janaina S S. Biava², Nathalia R. Eckermann³, Thamires U. Sturion⁴, Terezinha T. de Souza⁵, Maria Fernanda Cerutti⁶, Matheus F. F. V de Paula⁷, Daniel M. Polizel⁴, Alexandre Vaz Pires², Evandro Maia M. Ferreira²

¹State University of Ponta Grossa, ²ASAS, ³ESALQ/University of São Paulo, ⁴University of Sao Paulo, ⁵UFAM/Federal University of Amazonas, ⁶Anhembi Morumbi University, ⁷State University of Goiás

1:00 p.m. PSXIV-40 **Utilization of a group project in an introductory animal science course to concurrently develop collaborative work skills and increase animal science industry awareness**

Taylor Barnes¹, Kathrin Dunlap²

¹Texas A&M University - Animal Science Department, ²Texas A&M University

1:00 p.m. PSXIV-41 **Warm-season annual or perennial hay fed to growing beef steers with or without dried distillers grains supplementation: ruminal fermentation characteristics, digestion, and feeding behavior**

Joel D. Sugg¹, Carly A. Hoffmann¹, Lucas B. Kondratovich¹

¹Texas Tech University

Animal Behavior and Well-Being Session II

Chair: Daniela Meléndez Suárez, Agriculture and Agri-Food Canada

2:00 PM - 3:30 PM

Meeting Room 10A/B

2:00 p.m. 314 **How physically effective fiber affects ruminal pH in beef cattle fed high-concentrate diets**

Lourdes Llonch Fernández ¹, Lorena Castillejos ², Alfred Ferret Quesada ¹

¹Universitat Autònoma de Barcelona, ²Servei de Nutrició i Benestar Animal, Dept. de Ciència Animal i dels Aliments, UAB, 08193

2:15 p.m. 313 **Effects of transport time and rest stop duration on welfare indicators of beef cattle travelling by road**

Daniela M. Meléndez ¹, Sonia Martí ², Desiree Gellatly ³, Wiolene Nordi ³, Derek B. Haley ⁴, Timothy D. Schwinghamer ⁵, Karen S. Schwartzkopf-Genswein ¹

¹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada, ²IRTA, Ruminant Production, ³Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, ⁴University of Guelph, ⁵Agriculture and Agri-Food Canada

2:30 p.m. 312 **Effects of castration stress on behaviors and leukocyte cytokine gene expression in Korean cattle bull calves**

Seon Pil Yoo ¹, Myunggi Baik ², Hyeok Joong Kang ², Seung Ju Park ³, Dajinsol Jung ², Beak Seok-Hyeon ³, Inhyuk Jeong ⁴

¹Seoul national university, ²Seoul National University, ³Department of Agricultural Biotechnology, College of Agriculture and Life Science, Seoul National University, ⁴Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Sciences, Seoul National University

2:45 p.m. 310 **Using Synergistic Antibacterial Combinations based on Vegetable Essential Oils to Replace Feeding Antibiotics**

yanping Hu ¹, Jie Huang ¹, Zhongxin Zhou ¹

¹Huazhong Agricultural University

3:00 p.m. 311 **Evaluation of different types of journeys on welfare indicators of unweaned calves transported by road in Europe**

Sonia Martí ¹, Antonio Velarde ², Bruna Quintana ³, Xenia Moles ², Anna Sole ⁴, Maria Devant ¹

¹IRTA, Ruminant Production, ²IRTA, Animal Welfare, ³Ruminant Production, IRTA, ⁴Ruminant Production; IRTA

3:15 p.m. 309 **Effects of dietary supplying icariin on the bone metabolism and the laying performance in caged laying hens**

Jie Huang ¹, Lei Zhang ², Zhongxin Zhou ¹

¹Huazhong Agricultural University, ²Huazhong Agriculture University

Animal Behavior and Well Being Session I

Chair: Rodolfo Cardoso, Texas A&M University

2:00 PM - 4:00 PM

Meeting Room 12B

2:00 p.m. 301 **Effects of housing system on performance and behavior of dairy calves before and after weaning**

Shuai Liu¹, Gibson Alugongo¹, Jinghui Li¹, Zhijun Cao¹, Yajing Wang¹, Shengli Li²

¹State Key Laboratory of Animal Nutrition, College of Animal Science and Technology, China Agricultural University, ²China Agricultural University

2:15 p.m. 302 **Current Pain Mitigation Practices in Beef and Dairy Cattle in the United States**

Elizabeth C. Johnstone¹, Johann F. Coetzee², Lily N. Edwards-Callaway³, Pablo Pinedo⁴

¹Colorado State University College of Veterinary Medicine, ²Kansas State University College of Veterinary Medicine, Department of Anatomy and Physiology, Manhattan, KS,

³Department of Animal Sciences, Colorado State University, ⁴Colorado State University

2:30 p.m. 303 **Identification of Candidate Genes Related to Temperament in Brahman Cattle**

Francisco A. A. Paredes Sánchez¹, Eduardo Casas², GM Parra-Bracamonte³, W Arellano-Vera³, David G. Riley⁴, Thomas H. Welsh⁵, Ana A. Sifuentes-Rincón⁶, Ronald D. Randel⁷

¹Instituto Politécnico Nacional-Centro de Biotecnología Genómica, ²USDA, Agricultural Research Service, National Animal Disease Center, ³Genomic Biotechnology Center-IPN, Animal Biotechnology, ⁴Texas A&M University, ⁵Texas A&M University; Texas A&M AgriLife Research, College Station, ⁶Instituto Politécnico Nacional-Centro de Biotecnología Genómica, ⁷Texas A&M AgriLife Research, Overton, TX

2:45 p.m. 304 **Transgenerational influence of prenatal stress on temperament, birth weight, and weaning weight of Brahman calves**

Brittini P. Littlejohn¹, David G. Riley², Don A. Neuendorff³, Charles R. Long⁴, Thomas H. Welsh⁵, Ronald D. Randel⁶

¹Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State, MS, ²Texas A&M University, ³Texas A&M AgriLife Research & Extension Center at Overton,

⁴School of Veterinary Medicine and Biomedical Sciences, Texas A&M University, ⁵Texas A&M University; Texas A&M AgriLife Research, College Station, ⁶Texas A&M AgriLife

Research, Overton, TX

3:00 p.m. 305 **Cortisol response of dairy goat kids administered lidocaine injections, topical EMLA cream or meloxicam prior to cautery disbudding**

Melissa N. Hempstead¹, Taylor M. Lindquist¹, Jan K. Shearer¹, Leslie C. Shearer¹, Mhairi Sutherland², Paul J. Plummer¹

¹Iowa State University College of Veterinary Medicine, ²AgResearch Ltd.

3:15 p.m. 306 **Welfare implications of husbandry procedures impair piglets' welfare and production, and farms' economic**

Liat Morgan¹, Beata Itina-Swartz², Lee Koren³, Jerrold Meyer⁴, Tal Raz⁵

¹Koret School of Veterinary Medicine, the Hebrew University of Jerusalem, ²Environmental Economics and Management, The Hebrew University of Jerusalem, Israel, ³Institute of Nanotechnology and Advanced Materials, Bar-Ilan University, Israel, ⁴Department of Psychological and Brain Sciences, University of Massachusetts Amherst, MA, ⁵Koret School of Veterinary Medicine Robert H. Smith Faculty of Agriculture, Food, and Environment, The Hebrew University of Jerusalem

3:30 p.m. 307 **A social facilitator can reduce calf walking behavior at weaning**

Kirsten Nickles¹, Alejandro E. Relling¹, Anthony J. Parker¹

¹The Ohio State University

3:45 p.m. 308 **Changes in calf feeding behavior in response to sickness**

Mhairi Sutherland¹, Gemma Lowe¹, Mairi Stewart², Neil Cox³, Joseph Waas⁴, Karin Schutz¹

¹AgResearch Ltd., ²GRNZ, ³neilStat, ⁴Waikato University

Physiology Session III

Chair: Steven Zinn, Dept. of Animal Science, University of Connecticut

2:00 PM - 4:00 PM

Meeting Room 9C

2:00 p.m. **Presentation of Award: Wettemann Graduate Scholar in Physiology Award**

Robert P. Wettemann¹

¹Oklahoma State University

2:05 p.m. 378 **Awardee Talk - Impact of fetal versus maternal contributions of Bos indicus and Bos taurus genetics on embryonic and fetal development**

Pedro Levy Piza Fontes¹, Nicky Oosthuizen², Francine M. Ciriaco³, Carla D. Sanford⁴, Luara Bertelli Canal³, Ky G. Pohler¹, Darren D. Henry⁵, Vitor R G. Mercadante⁶, Claire L. Timlin⁷, Alan Ealy⁸, Sally Johnson⁹, Nicolas DiLorenzo¹⁰, G. Cliff Lamb¹

¹Texas A&M University, ²ABS Global, ³University of Florida, ⁴University of Florida, NFREC, ⁵Texas Tech University, ⁶Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences, ⁷Animal and Poultry Sciences, Virginia Tech, ⁸Virginia Polytechnic Institute and State University, ⁹Virginia Polytechnic and State Institution, ¹⁰Department of Animal Sciences, North Florida Research and Education Center (NFREC), University of Florida, Marianna, FL

2:30 p.m. 383 **Effect of trace mineral source on heifer reproductive performance**

George Perry¹, Stephanie Perkins¹, Emmalee Northrop¹, Jerica Rich¹, Kaitlin Epperson¹, Sarah Mayes¹, Cody Wright¹, Jason R. Russell²

¹South Dakota State University, ²Zinpro Corporation

2:45 p.m. 381 **Investigation of heat stress on differential gene expression in tolerant and susceptible pigs**

Yuqing He¹, Christian Maltecca¹, Francesco Tiezzi¹, William L. Flowers¹
¹North Carolina State University

3:00 p.m. 382 **Gene polymorphism of 5, 10-methylene tetrahydrofolate reductase is related to boar semen quality**

wen lai¹, chao Wang², Jian Peng²
¹Huazhong agricultural university, ²Huazhong Agricultural University

3:15 p.m. 379 **Effect of progesterone infused controlled internal drug releasing (CIDR) device and timing of gonadotropin stimulation using P.G. 600® on reproductive success in anestrus ewes**

Reid Redden¹, Tammi L. Neville², Dani Black³, Mellissa Crosswhite⁴, Carl R. Dahlen⁵
¹Texas A&M AgriLife Extension, ²USDA- NIFA, ³North Dakota State University, ⁴Oklahoma State University, ⁵North Dakota State University, Department of Animal Sciences

3:30 p.m. 380 **Effects of estradiol benzoate on reproductive characteristics in beef cows**

Lacey M. Dysart¹, Caleb O. Lemley¹, Riley D. Messman¹, Jamie E. Larson¹
¹Mississippi State University

3:45 p.m. 451 **Late-Breaking: Saccharomyces cerevisiae boulardii stimulates immunoglobulin A production in the gut of neonate dairy calves**

Clothilde Villot¹, Leluo Guan², Andy Skidmore³, Eric Chevaux¹, Michael A. Steele⁴
¹Lallemand SAS, ²University of Alberta, ³Lallemand Animal Nutrition, Milwaukee, WI, ⁴Department of Animal Biosciences, University of Guelph

Ruminant Nutrition Session IV

Chair: Terry Engle, Colorado State University

2:00 PM - 4:05 PM

Meeting Room 16A

2:00 p.m. **Presentation of Award: Cromwell Award for Research in Minerals**

Jerry Spears¹
¹North Carolina State University

2:05 p.m. 410 **Effect of relative dietary concentration of zinc amino acid complexes on growth performance and carcass characteristics of finishing beef steers - a nine study pooled analysis**

Christopher Reinhardt¹, Allison Millican², Tryon A. Wickersham², Connie K. Larson¹, Mark E. Branine¹
¹Zinpro Corporation, ²Texas A&M University

2:20 p.m. 411 **Relationships between dietary composition and reproductive outcomes in cattle**

Ty C. Davis¹, Robin R. White²
¹Virginia Tech, ²Virginia Tech School of Animal Sciences

2:35 p.m. 413 **Effect of chitosan inclusion and dietary crude protein level on rumen fermentation in beef heifers fed a total mixed ration**

Stuart Kirwan ¹, Tommy Boland ², Eleonora Serra ³, Gaurav Rajauria ³, Karina Pierce ³

¹University College Dublin, Ireland, ²UCD, ³University College Dublin

2:50 p.m. 412 **Supplementation of high-grain diet with brewers' spent grain protein hydrolysates reduced protein degradability and methane production in Rusitec**

Tao Ran ¹, Ranithri Abeynayake ², Atef Saleem ³, Xiuming Zhang ⁴, YiZhao Shen ⁵, Lingyun Chen ², Wenzhu Yang ⁶

¹Lethbridge Research and Development Centre, Lethbridge, AB T1J 4B1, Canada; Key Laboratory for Agro-Ecological Processes in Subtropical Region, Institute of Subtropical Agriculture, The Chinese Academy of Sciences, Changsha, Hunan 410125, China,

²University of Alberta, ³South Valley University, ⁴Key Laboratory for Agro-Ecological Processes in Subtropical Region, Institute of Subtropical Agriculture, The Chinese Academy of Sciences, ⁵Hebei Agricultural University, ⁶Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, T1J 4B1.

3:05 p.m. 414 **The influence of trace mineral source on fiber digestion, rumen fermentation characteristics, and mineral solubility in beef cattle fed a low-quality forage diet.**

Octavio Guimaraes ¹, Sam Jalali ¹, John J. Wagner ¹, Jerry Spears ², Terry E. Engle ¹

¹Colorado State University, ²North Carolina State University

3:20 p.m. 417 **Citrus aurantium flavonoid extract modifies the gene expression in the rumen of genes related to inflammation and behavior in Holstein bulls fed high-concentrate diets**

Montserrat Paniagua ¹, Javier F. Crespo ², Anna Aris ³, Maria Devant ⁴

¹Quimidroga, ²Interquim SA, ³Ruminant Production, IRTA, ⁴IRTA, Ruminant Production

3:35 p.m. 416 **Polyclonal antibody preparations from avian origin increase mean ruminal pH and reduce rectal temperature of beef steers during transition from forage to high-grain diets**

Gleise M. Silva ¹, Federico Podversich ², Erick R. S. Santos ¹, Tessa M. Schulmeister ², Carla D. Sanford ¹, Ana C. G. Luna ¹, Gonzalo Barreneche ¹, J. Sebastian C. Elejalde ¹, Nicolas DiLorenzo ³

¹University of Florida, NFREC, ²University of Florida, ³Department of Animal Sciences, North Florida Research and Education Center (NFREC), University of Florida, Marianna, FL

3:50 p.m. 415 **More efficient steers on good diets are not the most efficient ones on limiting diets**

Peter Carmona ¹, Luis Prada e Silva ¹, Diogo Fleury Azevedo Costa ¹, Lais Lima ¹

¹The University of Queensland

Nonruminant Nutrition Session VI: Gut Health

Chair: Emily Otto-Tice, Purina Animal Nutrition

2:00 PM - 4:15 PM

Meeting Room 14

2:00 p.m. 369 **An investigation into the influence of the seaweed extract laminarin on post-weaning pig performance and the intestinal microbiome**

Stafford Vigers¹, John O' Doherty¹, Mary McDonnell¹, Ruth Rattigan¹, Torres Sweeney¹

¹University College Dublin

2:15 p.m. 365 **Effects of weaning ages on growth performance of nursery pigs fed diets with increasing lactose levels during at 7 to 11 kg body weight**

Kibeom Jang¹, Jerry Purvis², S. W. Kim¹

¹North Carolina State University, ²Purvis Farms

2:30 p.m. 366 **Efficacy of mycotoxin deactivators on health and growth of newly weaned pigs under chronic dietary challenges of deoxynivalenol**

D. M. Holanda¹, S. W. Kim¹

¹North Carolina State University

2:45 p.m. 371 **Effects of dietary supplementation with lauric acid and AviPlusS on growth performance and gut health of newly weaned pigs**

Marcos Elias Duarte¹, E. Grilli², S. W. Kim¹

¹North Carolina State University, ²University of Bologna

3:00 p.m. 370 **Dietary soluble fiber increases the intestinal butyrate-producing bacteria, reduces intestinal permeability, and improves metabolic syndrome in sows during perinatal period**

Chuanshang Cheng¹, Hongkui Wei¹, Jian Peng¹

¹Huazhong Agricultural University

3:15 p.m. **Nonruminant Nutrition Session VI: Gut Health Break**

3:30 p.m. 362 **Effect of a modified hydrated sodium calcium aluminosilicate adsorbent on the growth performance, nutrients digestibility, and digestive tract morphology of chicks challenged with T-2 Toxin**

Kun-Tan Wu¹, Lv-hui Sun¹, Jin-Tao Wei¹, Ni-Ya Zhang¹

¹Huazhong Agricultural University

3:45 p.m. 367 **Combinational use of sodium butyrate and phytochemicals on intestinal health of nursery pigs**

S. Bloomer¹, Y.C. Cheng¹, H. M. Yakout², S. W. Kim¹

¹North Carolina State University, ²Adisseo North America

4:00 p.m. 363 **Integrated transcriptomic and gut microbiome analysis of the toxic effects of T-2 toxin on the small intestine of chickens**

Meng Liu¹, Jin-Tao Wei¹, Kun-Tan Wu¹, Mahmoud Mohamed Khalil², Lv-hui Sun¹

¹Huazhong Agricultural University, ²Benha University

Ruminant Nutrition Session III

Chair: Mohsen Jafarikia, Canadian Centre for Swine Improvement Inc., Ottawa, ON, Canada; Centre for Genetic Improvement of Livestock, University of Guelph, ON, Canada
2:00 PM - 4:15 PM
Meeting Room 12A

2:00 p.m. **Presentation of Award: Early Career Achievement Award**

Meghan Wulster-Radcliffe ¹
¹ASAS

2:05 p.m. 404 **Awardee Talk - Healthy gut, healthy calf, productive life**

Michael A. Steele ¹
¹Department of Animal Biosciences, University of Guelph

2:30 p.m. 406 **Reduce Reuse Rerumen: Reduction of Eschericia coli, coliform bacteria, Enterobacteriaceae, and yeast and mold colonies in dried paunch manure**

Ranee A. Miller ¹, William B. Smith ²
¹Department of Animal Science and Veterinary Technology, Tarleton State University,
²Tarleton State University

2:45 p.m. 405 **Effect of Subacute Ruminal Acidosis (SARA) and Saccharomyces cerevisiae fermentation products on inflammatory responses of dairy cows**

Terry Zhang ¹, Hooman Derakshani ², Ilkyu Yoon ³, Khafipour Khafipour ², Jan C. Plaizier ⁴
¹Jimei University, ²University of Manitoba, ³Diamond V, ⁴University of Manitoba

3:00 p.m. 408 **Effect of monensin intake during a stocker phase and subsequent finishing phase on rumen bacterial diversity of beef steers**

Caleb P. Weiss ¹, PAUL A. BECK ², John T. Richeson ³, Dexter J. Tomczak ³, Jianmin Chai ⁴, Tom Hess ⁵, Don S. Hubbell ¹, Jiangchao Zhao ¹
¹University of Arkansas, ²Oklahoma State University, Department of Animal & Food Sciences, ³West Texas A&M University, ⁴Department of Animal Science, University of Arkansas, Fayetteville, AR, 72701, ⁵University of Arkansas Division of Agriculture

3:15 p.m. **Ruminant Nutrition III Break**

3:30 p.m. 407 **Effects of calcium-ammonium nitrate on in vitro ruminal fermentation using a wheat forage based substrate**

Andrea O. Doblado ¹, Sebastian E. Mejia-Turcios ¹, Nadira J. Espinoza-Rock ¹, Evandro Dias ¹, Michael Sandes ¹, Rafael C. Araujo ², Francine M. Ciriaco ³, Jhones O. Sarturi ¹, Nicolas DiLorenzo ⁴, Darren D. Henry ¹
¹Texas Tech University, ²GRASP, ³University of Florida, ⁴Department of Animal Sciences, North Florida Research and Education Center (NFREC), University of Florida, Marianna, FL

3:45 p.m. 409 **Effects of essential oils on in vitro ruminal fermentation using a high-concentrate substrate**

Nadira J. Espinoza-Rock ¹, Andrea O. Doblado ¹, Sebastian E. Mejia-Turcios ¹, Evandro Dias ¹, Michael Sandes ¹, Erik Hagestuen ², Francine M. Ciriaco ³, Jhones O. Sarturi ¹, Darren D. Henry ¹
¹Texas Tech University, ²QualiTech, ³University of Florida

4:00 p.m. 403 **Using ruminally protected and unprotected *Saccharomyces cerevisiae* fermentation products as alternatives to antibiotics in finishing beef steers: growth performance and antimicrobial resistance**

YiZhao Shen ¹, Tao Ran ², Atef Saleem ³, Claudia Narveaz ⁴, Walaa Gomaa ⁵, Wenzhu Yang ⁶, Taylor Davedow ⁷, Ilkyu Yoon ⁸, Timothy A. McAllister ⁹

¹Hebei Agricultural University, ²Lethbridge Research and Development Centre, Lethbridge, AB T1J 4B1, Canada; Key Laboratory for Agro-Ecological Processes in Subtropical Region, Institute of Subtropical Agriculture, The Chinese Academy of Sciences, Changsha, Hunan 410125, China, ³South Valley University, ⁴University of Manitoba, ⁵Assiut University, ⁶Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, T1J 4B1., ⁷Agriculture and Agri-Food Canada, ⁸Diamond V, ⁹Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

Beef Species Symposium IV

Chair: Kendall Samuelson, West Texas A&M University

2:00 PM - 5:00 PM

Meeting Room 13A/B

2:00 p.m. **Beef Species Symposium IV Introduction**

2:05 p.m. 457 **A Retrospective Evaluation of Animal Mortality in US Feedyards**

Gary Vogel ¹, Stephanie Rutten-Ramos ¹

¹Elanco Animal Health

2:35 p.m. 458 **Mortality trends over time: A cattle feeder experience**

Alyssa Word ¹, Ben P. Holland ²

¹Cactus Feeders, ²Cactus Research

3:05 p.m. 459 **Interactions of Stress and Immunity in Beef Cattle**

John T. Richeson ¹

¹West Texas A&M University

3:35 p.m. **Beef Species Symposium IV Break**

3:45 p.m. 460 **Mid to Late Feeding Mortalities in Finishing Cattle and Potential Causes**

Milton G. Thomas ¹

¹Colorado State University

4:15 p.m. 461 **Effects of Morbidity on Carcass Characteristics in Beef Cattle**

Dale R. Woerner ¹

¹Texas Tech University

Growth and Development Session

Chair: Derris Burnett, PhD

2:00 PM - 5:00 PM

Meeting Room 10C

2:00 p.m. 343 **Wnt/ β -catenin Pathway is Required for Porcine Satellite Cell Proliferation and Differentiation to Promote Skeletal Muscle Growth**

Zong-ming Zhang¹, Chun-qi Gao¹, Hui-chao Yan¹, Xiu-qi Wang²

¹College of Animal Science, South China Agricultural University, ²College of Animal Science, South China Agricultural University

2:15 p.m. 346 **Supplementing Ca salts of soybean oil to enhance carcass quality of beef cattle via metabolic imprinting events**

Kelsey Schubach¹, Reinaldo F. Cooke¹, Alice P. Brandão¹, David W. Bohnert², Rodrigo Marques³

¹Texas A&M University, ²Oregon State University; EOARC, ³Oregon State University

2:30 p.m. 349 **Empty body composition and retained energy of Jersey steers using an aggressive implant strategy**

Tylo J. Kirkpatrick¹, Kaitlyn R. Wesley¹, Sierra L. Pillmore², Kimberly B. Cooper¹, Travis C. Tennant², Ty E. Lawrence²

¹Beef Carcass Research Center - West Texas A&M University, ²West Texas A&M University

2:45 p.m. 348 **An aggressive implant strategy altered non-carcass components in long-fed Jersey steers**

Sierra L. Pillmore¹, Tylo J. Kirkpatrick², Kaitlyn R. Wesley², Kimberly B. Cooper², Travis C. Tennant¹, Ty E. Lawrence¹

¹West Texas A&M University, ²Beef Carcass Research Center - West Texas A&M University

3:00 p.m. 342 **Economic Evaluation of Jersey Steers Using an Aggressive Implant Strategy**

Kaitlyn R. Wesley¹, Tylo J. Kirkpatrick¹, Sierra L. Pillmore², Kimberly B. Cooper¹, Travis C. Tennant², Ty E. Lawrence²

¹Beef Carcass Research Center - West Texas A&M University, ²West Texas A&M University

3:15 p.m. **Growth and Development Session Break**

3:30 p.m. 340 **Effects of nutrient restriction during mid- to late-gestation on maternal and fetal pancreatic exocrine function in sheep**

Ronald J. Trotta¹, Taylor M. Czech², Manuel A. Vásquez-Hidalgo², Kimberly A. Vonnahme³, Kendall C. Swanson²

¹University of Kentucky, ²North Dakota State University, ³Zoetis

3:45 p.m. 345 **The Effects of Maternal Nutrient Restriction Followed by Re-alimentation on Offspring Growth and Metabolism in Sheep**

Brandon I. Smith¹, Manuel A. Vásquez-Hidalgo², Kimberly A. Vonnahme³, Kendall C. Swanson², Anna T. Grazul-Bilska², Sarah A. Reed⁴, Steven A. Zinn⁴, Kristen E. Govoni⁴

¹University of Connecticut, ²North Dakota State University, ³Zoetis, ⁴Dept. of Animal Science, University of Connecticut

4:00 p.m. 344 **Protein supplementation during gestation enhances offspring growth performance of Wagyu sired but not Angus sired cattle**

Natasha Moffitt-Hemmer¹, Xiangdong Liu¹, Jeanene M. de Avila¹, J. Shannon Neibergs¹, Jan Busboom¹, Mark Nelson¹, Min Du¹

¹Washington State University

4:15 p.m. 341 **Up-regulation of wound healing pathway may trigger adipogenic potentials of intramuscular progenitor cells in Wagyu as compared to Angus cattle**

Min Du¹, Xiang Zhou², Xing Fu³, Yangzi Zhang⁴, Shuwen Zhang⁴, Jennifer J. Michal⁴, Hongyang Wang⁴, Zhihua Jiang¹

¹Washington State University, ²Huazhong Agricultural University, ³Louisiana State University, ⁴WSU

4:30 p.m. 350 **The Effect of Early Intervention with Fecal Microbiota Transplantation Combined *C.butyricum* and *S.boulardii* on Weaning Stress of Piglets**

Quanhang Xiang¹, Jian Peng¹

¹Huazhong Agricultural University

Animal Behavior and Well Being Session III

Chair: Désirée Gellatly, Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre

3:45 PM - 5:30 PM

Meeting Room 10A/B

3:45 p.m. 317 **Survey of Veterinary Student Attitudes Toward Animal Welfare and Pain**

Miriam S. Martin¹, Angela Baysinger², Abbie Viscardi³, Michael D. Kleinhenz¹, Lily N. Edwards-Callaway⁴, Elizabeth C. Johnstone⁵, Johann F. Coetzee⁶

¹Kansas State University, ²Merck Animal Health, ³Kansas State University College of Veterinary Medicine, ⁴Department of Animal Sciences, Colorado State University, ⁵Colorado State University College of Veterinary Medicine, ⁶Kansas State University College of Veterinary Medicine, Department of Anatomy and Physiology, Manhattan, KS

4:00 p.m. 319 **Effects of repeated exposure to either energized or non-energized prods on the behavioral responses of beef cattle to handling**

Désirée Gellatly¹, Daniela M. Meléndez Suárez², Sonia Marti³, Diego Moya⁴, Xiaohui Yang¹, John S. Church⁵, Karen S. Schwartzkopf-Genswein⁶

¹Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, ²Agriculture and Agri-Food Canada, ³IRTA, Ruminant Production, ⁴Assistant Professor, Large Animal Clinical Sciences, ⁵Thompson Rivers University, ⁶Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada

4:15 p.m. 318 **Total flavonoids from *Rhizoma drynariae* ameliorate low calcium-induced osteoporosis by regulating the bone metabolism in caged laying hens**

Jie Huang¹, Lei Zhang², Zhongxin Zhou¹

¹Huazhong Agricultural University, ²Huazhong Agriculture University

4:30 p.m. 321 **Socio-demographic factors associated with attitudes towards animals among first-year veterinary students**

Jesse Robbins¹, Rebecca Parsons¹, Anna K. Johnson¹, Matthew Jorgensen¹, Jared Danielson¹, Suzanne Millman¹

¹Iowa State University

4:45 p.m. 320 **Carcass Characteristics of Bos indicus-Bos taurus Steers Following BVDV Type 1b Challenge**

Arthur Knowles¹, Joe Paschal¹, Chase Runyan², Jason Sawyer³, Andy D. Herring¹

¹Texas A&M University, ²Angelo State University, ³Texas A&M University-Kingsville

5:00 p.m. 322 **Challenges for porc value chains - simultaneous implementation of elevated animal welfare standards under field conditions**

Julia Steinhoff-Wagner¹, Neele Meier¹, Maria Diel¹, Kamila Dynowski¹, Celine Heinemann¹, Jonas Stein¹, Christian Bode¹, Isabell Meyer¹, Benedikt G. Schulze Dieckhoff¹, Ramona Bleeser¹, Jason J. Hayer¹, Sandra Erdmann²

¹Institute of Animal Science, University of Bonn, Germany, ²Fleischwerk EDEKA Nord GmbH

5:15 p.m. 316 **Comparison of two cannulation methods on post-operative recovery in sheep**

Claire B. Gleason¹, Robin R. White², Hollie Schramm³

¹Virginia Tech, ²Virginia Tech School of Animal Sciences, ³Virginia-Maryland College of Veterinary Medicine